LELAND STANFORD JUNIOR UNIVERSITY

REGISTER FOR 1916-17

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LELAND STANFORD JUNIOR UNIVERSITY

TWENTY-SIXTH
ANNUAL REGISTER
1916-1917

"The beneficence of the Creator towards man on earth, and the possibilities of humanity, are one and the same."—LELAND STANFORD.

"A generous education is the birthright of every man and woman in America."
—DAVID STARR JORDAN

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STANFORD UNIVERSITY, CALIFORNIA
FEBRUARY, 1917

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OFFICE DIRECTORY

[The rooms in the Inner Quadrangle are numbered consecutively, beginning at the left of the main entrance, ten numbers being allotted to each building. In the Outer Quadrangle forty numbers are allotted to each of the larger buildings and ten numbers to each one-story building, beginning with the Assembly Hall and number 120. The Engineering buildings south of the Quadrangles begin with number 500. The Chemistry building is on the west avenue between the Quadrangles and the Museum. Anatomy and Bacteriology and Immunology are in the old Museum building.]

The administration offices are:

PRESIDENT, room 116.
REGISTRAR, room 110.
ACADEMIC SECRETARY, room 113.
APPOINTMENT SECRETARY, room 119.
MEDICAL ADVISER OF MEN, Encina Gymnasium.
MEDICAL ADVISER OF WOMEN, room 203.
DEAN OF WOMEN, room 114.
STUDENT ADVISER, room 117.
TREASURER, room 250.
COMMITTEE ON PUBLIC HEALTH, room 113.

The various Departmental offices are given in the SCHEDULE and in the DIRECTORY OF OFFICERS AND STUDENTS.

The University Post Office is *Stanford University, California.*

The University Telephone Office is *Palo Alto* (Office and Departmental telephones Palo Alto 900 with local numbers added).

The University Railway Station and Telegraph and Express Office is *Palo Alto, California.*

Requests for *Registers*, blanks and other printed matter, and inquiries regarding terms of admission, advanced standing, etc., should be addressed to THE REGISTRAR, *Stanford University, California.*

UNIVERSITY CALENDAR

1916

Aug.	28	Monday	Registration of Students.
Aug.	30	Wednesday	
Aug.	31	Thursday	Instruction begins in all Departments.
Nov.	30	Thursday	Thanksgiving Recess.
Dec.	3	Sunday	
Dec.	14-20	Saturday-Friday	End-Semester Examinations at Stanford University.
Dec.	20	Friday	Work closes in the School of Medicine in San Francisco.

1917

Jan.	8-9	Monday-Tuesday	Registration of Students.
Jan.	10	Wednesday	Instruction begins in all Departments.
Feb.	22	Thursday	Washington's Birthday.
March	9	Friday	Founders' Day.
March	31	Saturday	Mid-Semester Recess.
April	8	Sunday	
May	10-16	Thursday-Wednesday	End-Semester Examinations.
May	14	Monday	Birthday of Leland Stanford Junior.
May	16	Wednesday	Work closes in the School of Medicine in San Francisco.
May	20	Sunday	Baccalaureate Sunday.
May	21	Monday	Commencement.

Oct.	1	Monday	Registration for the Autumn Quarter.
Oct.	2	Tuesday	Instruction begins.
Dec.	19-21	Wednesday-Friday	End-Quarter Examinations.

1918

Jan.	2	Wednesday	Registration for the Winter Quarter.

ADMINISTRATIVE OFFICERS

THE BOARD OF TRUSTEES

[The figures in parentheses indicate year of beginning of service.]

Frank Bartow Anderson (1912), California and Sansome, San Francisco
Ralph Arnold, Ph. D. (1915), Union Oil Bldg., Los Angeles
William Babcock (1905), San Rafael
Frank Prentiss Deering, A. M. (1916) Nevada Bank Bldg., San Francisco
Charles Parmelee Eells, A. B. (1905), 2415 Pierce st., San Francisco
Joseph Donohoe Grant, A. B. (1891), 2200 Broadway, San Francisco
Herbert Clark Hoover, A. B. (1912), 604 Mills Bldg., San Francisco
Timothy Hopkins (1885), (Nevada Bank Bldg., S. F.), Menlo Park
Samuel Franklin Leib, LL. B. (1891), First Ntl. Bank Bldg., San Jose
Percy T. Morgan (1916), Union Trust Co., San Francisco
William Mayo Newhall, B. S. (1912), 260 Calif. st., San Francisco
James Leroy Nickel (1909), Merchants Exchange Bdg., San Francisco
Leon Sloss (1891), 310 Sansome st., San Francisco
Thomas Welton Stanford (1893) 142 Russell st., Melbourne, Aus.
Vanderlynn Stow, A. B. (1906) 2900 Broadway, San Francisco

OFFICERS OF THE BOARD

President: William Mayo Newhall.
Vice-President: Charles Parmelee Eells.
Treasurer and Business Manager: Vanderlynn Stow.
Assistant Treasurer: William Babcock.
Secretary: Leon Sloss.

STANDING COMMITTEES OF THE BOARD

Finance: Sloss, Anderson, Babcock, Leib, Morgan, Newhall, Nickel, Stow.
University: Arnold, Deering, Eells, Grant, Hoover, Hopkins, Newhall, Stanford, Stow.
Library: Hopkins, Eells, Newhall, Stow.
Rules: Eells, Grant, Newhall, Sloss.
Museum: Babcock, Leib, Morgan, Stow.
Grounds: Newhall, Morgan, Sloss, Stow.
Church: Leib, Morgan, Stow.

THE FACULTY

[Office and office hours in parentheses; MTWThF unless otherwise specified.]

President: Ray Lyman Wilbur. (116, 10-12, 2-5)
Vice-President: John Maxson Stillman. (44c, 2-4)
Registrar: Orrin Leslie Elliott. (110, 8-12, 1:05-4:05, S 8-12.)
Librarian: George Thomas Clark. (Library, 9-4:30.)
Academic Secretary: George Archibald Clark. (113, 8-11, 2-5.)
Dean of Women: Harriet Bradford. (114, MWF 9-12, TTh 10:15-12, M 1:30-2:30.)
Student Adviser: Warren Paul Staniford. (117, 10-12, MTThF 2-3, W 4:15-5:15.)
Chaplain: David Charles Gardner. (Vestry, TWThF 8:30-12.)
Appointment Secretary: Elizabeth Burritt Snell. (119, 10-12, 2-4, S 10-12.)
Medical Adviser of Women: Clelia Duel Mosher. (203, 1:30-2:30.)
Medical Adviser of Men: Herbert Rowell Stolz. (Encina Gymnasium, 9-12, 2-4.)

DEPARTMENT EXECUTIVES

[Office in parentheses.]

Anatomy: Arthur William Meyer. (7md.)
Applied Mathematics: Leander Miller Hoskins. (275.)
Bacteriology and Immunology: Wilfred Hamilton Manwaring. (15md.)
Botany: Douglas Houghton Campbell. (468.)
Chemistry: John Maxson Stillman. (44ch.)
Civil Engineering: Charles David Marx. (271.)
Economics: Murray Shipley Wildman. (223.)
Education: Ellwood Patterson Cubberley. (51.)
Electrical Engineering: Harris Joseph Ryan. (505.)
English: William Herbert Carruth. (209.)
Entomology and Bionomics: Rennie Wilbur Doane (acting). (430a.)
Geology and Mining: Bailey Willis. (340.)
Germanic Languages: George Hempl. (32.)
Greek: Augustus Taber Murray. (25.)
History: Ephraim Douglass Adams. (237.)
Latin: Henry Rushton Fairclough. (22.)
Law: Charles Andrews Huston. (3.)
Mathematics: Robert Edgar Allardice. (70.)
Mechanical Engineering: William Frederick Durand. (260.)

Medicine: WILLIAM OPHÜLS. (San Francisco.)
  Anatomy: ARTHUR WILLIAM MEYER. (7md.)
  Bacteriology and Immunology: WILFRED HAMILTON MANWARING. (15md.)
  Chemistry: JOHN MAXSON STILLMAN. (44ch.)
  Hygiene and Public Health: WILLIAM FREEMAN SNOW. (New York, N. Y.)
  Medicine: ALBION WALTER HEWLETT. (San Francisco.)
  Obstetrics and Gynecology: ALFRED BAKER SPALDING. (San Francisco.)
  Pathology: WILLIAM OPHÜLS. (San Francisco.)
  Pharmacology: ALBERT CORNELIUS CRAWFORD. (San Francisco.)
  Physiology and Histology: ERNEST GALE MARTIN. (482.)
  Surgery: STANLEY STILLMAN. (San Francisco.)
Philosophy: HENRY WALDGRAVE STUART. (93.)
Physics: FERNANDO SANFORD. (390.)
Physiology and Histology: ERNEST GALE MARTIN. (482.)
Psychology: FRANK ANGELL. (399.)
Romanic Languages: OLIVER MARTIN JOHNSTON. (246.)
Zoology: CHARLES HENRY GILBERT. (443.)

Library: GEORGE THOMAS CLARK.
Memorial Church: DAVID CHARLES GARDNER.
Military Training: JENS BUGGE.
Museum: HARRY C. PETERSON.
Physical Training—
  Encina Gymnasium: HERBERT ROWELL STOLZ.
  Roble Gymnasium: CLELIA DUEL MOSHER.

STANDING COMMITTEES OF THE ACADEMIC COUNCIL

[The first named member in each Committee is Chairman.]

ADVISORY BOARD

Hoskins, Durand, Fairclough, Gilbert, Green, Huston, C. D. Marx, Meyer, Sanford (Secretary).

ADMINISTRATIVE COMMITTEES

1. Student Affairs: Lesley, Eckart, Kirkwood, Miller, Moreno, Miss Bradford.
2. Athletics: Angell, Murray, J. P. Smith, Stolz, Wing.
3. Public Exercises: Peirce, H. C. Brown, Seward, Tatlock, S. W. Young.
4. Literary Contests: Bassett, Cathcart, P. A. Martin, Miller, de Vries.
5. Public Health: Mitchell, Miss Bradford, Mosher, Stolz.
6. Scholarship: Gilbert, Elliott, Fish, Johnston, Show, Whittier.
7. Public Entertainments: (Omitted for 1916-17.)
8. Vocational Guidance: J. G. Brown, Fish, Hall, Huston, West.

ACADEMIC COMMITTEES

1. Executive Committee: Wilbur, Stillman, Alden, Cathcart, G. A. Clark, Elliott, Fish, Foster, Gilbert, Green, Huston, Meyer, Swain, Townley.
2. Admission and Advanced Standing: Elliott, Cannon, Eckart, Tatlock, Townley.
3. Registration: Elliott, Abrams, Davidson, Stoltenberg, West.
4. Graduation: Wildman, Carruth, Elliott, Price, Willis.
5. Schedule and Examinations: Huston, Elliott, Moreno, A. F. Rogers, Whitaker.
6. Graduate Study: Franklin, Alden, Durand, Fairclough, Hoskins, Kellogg, Meyer, Peirce, Stillman, Stuart, Wildman.
7. Library: Stillman, Adams, Cooper, E. G. Martin, G. H. Marx.
8. University Publications: Townley, Kellogg, Adams, Briggs, G. T Clark.
9. Recommendation of Teachers: Cubberley, Johnston, P. A. Martin, Seward, Show.

FACULTY AND OTHER OFFICERS

[Name; office; residence telephone; title; residence; post-office. Post-office in all cases *Stanford University* except where university residence is followed by initial letter of town ('p' indicates *Palo Alto* post-office; 'Mayfield-m,' *Mayfield* post-office; etc.). Street address *Palo Alto* or *Campus* unless otherwise named.

Brackets indicate 'absent on leave'; the dagger (†) marks the names of men who are married.

The superior number 1 indicates service for the first semester only; 2 for the second semester only.]

†Anderson, Melville Best,
Professor of English Literature, Emeritus, Florence, Italy
A. M., Butler University, 1877; LL. D., Aberdeen, 1906. At Stanford since 1891, Emeritus since 1910.

†Barkan, Adolph,
Professor of Structure and Diseases of Eye,
Ear, and Larynx, Emeritus, 2209 Laguna, SF-sf
M. D., University of Vienna, 1866; LL. D., University of Glasgow, 1901. At Stanford since 1909, Emeritus since 1911.

†Branner, John Casper,
President, Emeritus, 13 Alvarado
B. S., Cornell, 1882; Ph. D., Indiana, 1885; LL. D., Arkansas, 1897, Maryville College, 1909, California, 1915; D. Sc., Chicago, 1916. Professor of Geology, 1891-1915, Vice-President, 1898-1913, President, 1913-1915, Emeritus since 1916.

†Hirschfelder, Joseph Oakland,
Clinical Professor of Medicine, Emeritus, 1392 Geary, SF-sf
M. D., University of Leipzig, 1876. At Stanford, since 1909, Emeritus since 1912.

†Jenkins, Oliver Peebles,
Professor of Physiology and Histology, Emeritus, 3 Lasuen
A. B., Moore's Hill College, 1869, A. M., 1872; M. S., Indiana, 1886, Ph. D., 1889; LL. D., Moore's Hill College, 1916. At Stanford since 1891, Emeritus since 1916.

†Jordan, David Starr,
Chancellor, Emeritus, Xazmin House
M. S., Cornell, 1872; M. D., Indiana Medical College, 1875; Ph. D., Butler College, 1878; LL. D., Cornell, 1886, Johns Hopkins, 1902, Illinois College, 1903, Indiana, 1909, California, 1915, Western Reserve, 1915. President of the University, 1891-1913, Chancellor, 1913-16. Emeritus since 1916.

Martin, Lillien Jane,
Professor of Psychology, Emeritus, 729 Jones, San Francisco
A. B., Vassar, 1880; M. L. A. and hon. Ph. D., Bonn, 1913. At Stanford since 1899, Emeritus since 1916.

†Abrams, Leroy, PA 1125
Associate Professor of Botany, 23 Salvatierra
A. B., Stanford, 1899, A. M., 1902; Ph. D., Columbia, 1910. Acting Professor of Botany, University of Idaho, 1899-1900; Assistant in Botany, Leland Stanford Junior University, 1900-02, Instructor, 1902-04; Fellow in Botany, Columbia University, 1904-05; Assistant Curator, Division of Plants, United States National Museum, 1905-06; Lecturer in Botany, University of California, first semester, 1915-16. At Stanford 1900-04, and since 1906.

Adams, Ephraim Douglass, PA 1058
Professor of History, 9 Alvarado

A. B., Michigan, 1887, Ph. D., 1890. Principal of High School, McGregor (Ia.), 1887; Principal of High School, Saginaw (Mich.), 1889; Special Agent in Charge of Street Railways, Eleventh Census, Washington (D. C.), 1890; Assistant Professor and afterward Professor of European History, University of Kansas, 1891-1902. At Stanford since 1902.

†Addis, Thomas, Sausalito 194
Associate Professor of Medicine, 21 Miller av., Sausalito-s

M. B. Ch. B., Edinburgh, 1905, M. D. and M. R. C. P., 1908. Clinical Assistant, Medical Out-Patient Department, Royal Infirmary of Edinburgh, 1908, 1911; Medical Registrar, Leith Hospital, 1911; Carnegie Research Scholar and Fellow, 1908-11; Director of the Clinical Laboratory, Lane Hospital, since 1911. At Stanford since 1911.

†Alden, Raymond Macdonald, PA 288
Professor of English, 427 Embarcadero road

A. B., Pennsylvania, 1894; A. M., Harvard, 1896; Ph. D., Pennsylvania, 1898. Instructor in English, Columbian University, 1894-95; Assistant in English, Harvard University, 1896-97; Senior Fellow in English, University of Pennsylvania, 1898-99, Instructor, 1899-1901; Assistant Professor of English Literature and Rhetoric, Leland Stanford Junior University, 1901-09, Associate Professor of English, 1909-11; Professor of English, University of Illinois, 1911-14; Acting Associate Professor, University of Chicago, Summer Quarter, 1910; Acting Professor, Harvard University, Summer Session, 1912, Columbia University, 1916. At Stanford 1901-11 and since 1914.

†Alderson, Harry Everett, SF, Fillmore 4548
Associate Clinical Professor of Medicine, 2649 Green, SF-sf

M. D., California, 1900; Assistant in Skin Diseases, Medical Department of University of California, 1906-12; Professor of Art Anatomy, California School of Design, 1906-12; Chief of Skin Clinic, San Francisco Fruit and Flower Mission. At Stanford since 1912.

[Allan, Evelyn Wight (Mrs.),
Dean of Women, Berkeley]

B. S., St. Lawrence University, 1891; A. B., Stanford, 1896. Teacher in Montclair (N. J.), High School, 1892-95; Teacher of English, Jersey City High School, 1897-99; Graduate Student at Columbia University, 1907; Teacher of English, Manual Training High School, Brooklyn (N. Y.), 1899-1908. At Stanford since 1908.

Allardice, Robert Edgar, PA 1036
Professor of Mathematics, County Road

A. M., Edinburgh, 1882. Baxter Scholar in Mathematics, University of Edinburgh, 1882-83, Drummond Scholar in Mathematics, 1883-84; Assistant Professor of Mathematics, University of Edinburgh, 1883-92. At Stanford since 1892.

†Allen, Clifford Gilmore, PA 1031X
Associate Professor of Romanic Languages, 25 Alvarado

A. B., Boston, 1900; A. M., Stanford, 1903; Docteur de l'Université de Paris, 1906. Student, University of Paris, 1903-04; Fellow of Boston University and Student at Universities of Paris and Madrid, 1904-05. At Stanford since 1901.

Angell, Frank,
Professor of Psychology, 1200 Bryant

B. S., Vermont, 1878; Ph. D., Leipzig, 1891; L. H. D., Vermont, 1892. Teacher in Washington (D. C.) High School, 1880-87; Assistant Professor of Psychology, Cornell University, 1891-92. At Stanford since 1892.

†Barkan, Hans, SF, Pacific 7057
Clinical Instructor in Surgery (Ophthalmology), 608 Lake, SF-sf

A. B., Stanford, 1905; M. D., Harvard Medical School, 1910. Assistant in

Pathology, Harvard Medical school, 1910-11, Instructor, 1911-12; Pathologist to the Long Island Hospital and Boston City Almshouse, 1911-12; Voluntary Assistant, II, Eye Clinic, Vienna, 1912-14. At Stanford since 1914.

Barnett, George De Forest, SF, West 8004
Instructor in Medicine, 2402 California, SF-sf

A. B., Stanford, 1906, A. M., 1909, M. D. 1913. Instructor in Chemistry, Leland Stanford Junior University, 1909-10; Student, Johns Hopkins Medical School, 1910-12; Senior House Officer, Lane Hospital, 1914-15. At Stanford since 1915.

†Bassett, Lee Emerson, PA 1080
Associate Professor of English, 9 Cabrillo

A. B., Stanford, 1901. Graduate, Cumnock School of Oratory, Los Angeles, 1898; Instructor in Public Speaking, University of Southern California, 1898-99; Student, School of Expression, Boston, 1901; Student, Department of Literature, University of Chicago, summer, 1904; Student at Oxford, 1907-08. At Stanford since 1901.

Beasley, Shadworth O., 240 Stockton, SF-sf
Clinical Instructor in Obstetrics and Gynecology,

M. D., Cooper Medical College, 1897. Acting Assistant Surgeon, U. S. A., 1898; 1st Lieutenant and Assistant Surgeon, U. S. Vol., 1899; Captain and Assistant Surgeon, U. S. Vol., 1900; Major and Surgeon, U. S. Vol., 1901-03; Assistant in Anatomy. Cooper Medical College, 1904-06, Assistant in Surgical Clinic, 1903-06, Assistant, Genito-Urinary Clinic, 1909-11; American Red Cross Serbian Unit 3, 1915. At Stanford since 1913.

[†Bentley, Rufus Clarence,
Associate Professor of Education, 12 Alvarado]

A. B., Nebraska, 1894, A. M., 1896. Assistant in Psychology, University of Nebraska, 1893-96; Principal of Schools, Shelton (Neb.), 1896-97; Principal of High School, Martinez (Cal.), 1897-98; Principal of High School and Supervising Principal of Schools, San Rafael (Cal.), 1898-1900; Fellow, Columbia University, 1900-01; Fellow, Clark University, 1901-03; Dean of Clark College, 1902-09, Professor of Latin, 1902-04, Professor of Pedagogy, 1904-09. At Stanford since 1910.

Berger, Alice Ruth,
Instructor in Chemistry, 73 No. 6th, SJ

A. B., Stanford, 1908, A. M., 1913. At Stanford since 1911.

[2]Bering, Robert Eugene, SF, Market 8048
Lecturer on Drug Addictions (Neurology) 300 Page, SF-sf

†Bingham, Joseph Walter, PA 754W
Professor of Law, 1001 Cowper-p

A. B., Chicago, 1902, J. D., 1904. In practice of law, Chicago, 1904-05; Acting Assistant Professor of Law, Cornell University, 1905-07. At Stanford since 1907.

†Blaisdell, Frank Ellsworth, SF, Pacific 3482
Assistant Professor of Surgery, 1520 Lake, SF-sf

M. D., Cooper Medical College, 1889. Demonstrator of Anatomy, Cooper Medical College, 1903, Instructor in Biology and Embryology, 1900-09, in Histology, 1907-09, Assistant Professor of Anatomy, 1904-05, Associate Professor, 1907-12. At Stanford since 1910.

Blichfeldt, Hans Frederick, PA 435
Professor of Mathematics, College Terrace

A. B., Stanford, 1896; Ph. D., Leipzig, 1898. At Stanford since 1898.

Boardman, Walter Whitney, SF, Fillmore 2506
Assistant Professor of Medicine, 2259 Vallejo, SF-sf

M. D., Cooper Medical College, 1909. Assistant in Phipps Dispensary, Johns Hopkins Hospital, 1910, Assistant in Actinography and Externe in Gynecology, 1911; Director of Actinography, Lane Hospital, 1912. At Stanford since 1912.

†BOEZINGER, BRUNO, PA 196
Assistant Professor of German, 176 Bryant-p

A. B., Fort Worth University, 1894, A. M., 1895; Ph. D., Stanford, 1910. Instructor in German, North Texas Normal School, 1895-98; Principal, German Department, San Antonio (Texas) H. S., 1899-1906; Instructor in German, Summer School, University of Texas, 1896. At Stanford since 1906.

BOEZINGER, LYDIA MARIE, SF, West 659
Secretary to Dean of Medical School, 2401 Sacramento, SF-sf

At Stanford since 1912.

†BOHART, GEORGE SHAMBAUGH, PA 717X
Instructor in Chemistry, 856 Middlefield-p

A. B., Stanford, 1911, A. M., 1912, Ph. D., 1914. At Stanford since 1911.

BRADFORD, HARRIET PA 1110
Dean of Women, 4 Lasuen

A. B., Bryn Mawr, 1915. At Stanford since 1916.

BRANDSTEN, ERNEST,
Instructor in Physical Training, 334 Waverley

Teacher of Swimming, Municipal Baths, Stockholm, Sweden, 1905; Swimming Coach, Neptune Swimming Club, Stockholm, 1906, University of California, 1911, 1913-15. At Stanford since 1915.

†BRIGGS, WILLIAM DINSMORE, PA 260M
Associate Professor of English, 249 Lowell-p

A. B., Stanford, 1896; A. M., Harvard, 1899, Ph. D., 1900. Student, Johns Hopkins University, 1896-97; Instructor in English and German, University of Vermont, 1900-01; Instructor in English, Western Reserve University, 1901-06. At Stanford since 1906.

†BRODRICK, RICHARD GODFREY, SF, Mission 827
Assistant Clinical Professor of Hygiene and Public Health,
Potrero and 22d, SF-sf

M. D., Cooper Medical College, 1892. Assistant Surgeon, U. S. Navy, 1893, Naval Medical School, New York, 1893-94, Asiatic Station, 1894-98; Past Assistant Surgeon, U. S. Navy, 1896, retired from active duty, 1899; Student, Vienna, 1899-1902; Health Officer, San Francisco, 1908-10, 1912; Executive Secretary, San Francisco Association for the Study and Prevention of Tuberculosis, 1910-11. At Stanford since 1912.

BROOKS, LUCIA MAY, PA 1025
Chief of Serial Department, Library, 1 Salvatierra

Special Student, University of Minnesota, 1889-95; Cataloguer, University of Minnesota Library, 1905-09. At Stanford since 1910.

†BROWN, HAROLD CHAPMAN, PA 1006
Assistant Professor of Philosophy, 16 Salvatierra

A. B., Williams, 1901; A. M., Harvard, 1903, Ph. D., 1905; Student, University of Berlin, 1903-04; Assistant in Philosophy, Harvard University, 1904-06; Instructor in Philosophy, Columbia University, 1906-14. At Stanford since 1914.

BROWN, JOSEPH GRANT, (385) PA 559L
Assistant Professor of Physics, 1013 Ramona-p

A. B., Stanford, 1901, A. M., 1903. Graduate, Illinois State Normal University, 1894, Instructor in Physics and Chemistry, 1894-98. At Stanford since 1900.

BUCKINGHAM, ELISABETH LEE, PA 1057
Instructor in English, 7 Lasuen

A. B., Stanford, 1910, A. M., 1914. Student, Columbia College of Expression, Summer, 1913; Teacher of Public Speaking, State Normal School, San Jose, 1914; Student, Columbia University, Summer Session, 1916. At Stanford since 1911.

†Bugge, Jens, PA 1148
Professor of Military Science and Tactics, 1500 Bryant-p
Major, U. S. Army, Retired.

Burke, William Edmund,
Instructor in Chemistry, Menlo Heights
A. B., Stanford, 1907. Assistant Chemist, Experiment Station of Hawaiian Sugar Planters' Association, Honolulu, 1907-08. At Stanford since 1914.

†Burlingame, Leonas Lancelot, PA 1144
Associate Professor of Botany, 24 Alvarado
Ph. B., Ohio Northern University, 1901; A. B., Chicago, 1906, Ph. D., 1908. Instructor in Biology, Ohio Northern University, 1901-04; Fellow in Botany, University of Chicago, 1906, Assistant, 1906-08. At Stanford since 1908.

Burrell, Florence Cotton, PA 406X
Instructor in Roble Gymnasium, 364 Kingsley-p
A. B., Stanford, 1910, A. M., 1916. Student, University of California, 1911-12, Summer, 1910; Summer Playground Director, Oakland, 1912, 1914; Teacher of Hygiene, Oakland High Schools, 1912. At Stanford since 1913.

Campbell, Douglas Houghton, PA 1036
Professor of Botany, County Road
Ph. M., Michigan, 1882, Ph. D., 1886. Teacher of Biology, Detroit High School, 1882-86; Student at Bonn, Tübingen, and Berlin, 1886-88; Professor of Botany, Indiana University, 1888-91. At Stanford since 1891.

†Cannon, Henry Lewin, PA 1046
Associate Professor of History, 301 Addison
A. B., Western Reserve, 1893; Ph. D., Pennsylvania, 1898. Student, Harvard University, 1893-94, Yale University, 1896-97; Fellow in European History, University of Pennsylvania, 1897-98; Instructor in History, University of Cincinnati, 1900-03. At Stanford since 1903.

†Carruth, William Herbert, PA 299
Professor of Comparative Literature, Mirada av.
A. B., Kansas, 1880, A. M., 1883; A. M., Harvard, 1889, Ph. D., 1893. Student, Universities of Berlin and Munich, 1885-86; Morgan Fellow at Harvard University, 1888-89; Instructor in English, University of Kansas, 1879-80, Assistant Professor of Modern Languages, 1880-82, Professor, 1882-89, Professor of German, 1889-1913, Vice-President, 1901-13; Professor of German Literature, University of Wisconsin, Summer Session, 1907; President, Central Division American Modern Language Association, 1894-97. At Stanford since 1913.

†Cathcart, Arthur Martin, PA 197
Professor of Law, 209 Addison
A. B., Stanford, 1896. Student, Harvard University, 1896-97; Registered Office Clerk with Attorneys of Colorado Supreme Court, 1900-02; Attorney at Law, Colorado Springs (Colo.), 1903-04; Lecturer in Law, University of California, Summer Session, 1908; Professor of Law, University of Chicago, Summer Quarter, 1911. At Stanford since 1904.

*Charles, Samuel Watson,
Lecturer in Law,
A. B., Stanford, 1898.

†Cheney, William Fitch, SF, Pacific 2573
Clinical Professor of Medicine, 33 Spruce, SF-sf
B. L., California, 1885; M. D., Cooper Medical College, 1889. Professor of Principles and Practice of Medicine, Cooper Medical College, 1898-1912. At Stanford since 1909.

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*Deceased December 11, 1916.

Church, Elizabeth, PA 13
Acting Assistant Professor of English, 604 Kingsley-p

A. B., Dalhousie, 1896; A. M., Radcliffe, 1903, Ph. D., 1913. Instructor in English, Medford (Mass.) High School, 1897-1905; W. E. A. Fellow at Radcliffe College, 1909-10; Acting Head of English Department, Rockford College, 1906-07; Instructor in English, Wellesley College, 1910-12; Assistant in English, Simmons College, 1912-13; Assistant Professor of English and Adviser of Women, University of Oklahoma, 1914-15. At Stanford since 1915.

†**Clark, Arthur Bridgman,** PA 1023
Professor of Education, 4 Cabrillo

B. Ar., Syracuse, 1888, M. Ar., 1891. Director of Trade Schools and Instructor in Drawing, New York State Reformatory, Elmira (N. Y.), 1888-89; Instructor in Architecture, Syracuse University, 1889-92; Student in Painting, New York School of Art and Academie Carmen, Paris, 1898-99; Instructor in Pottery, California School of Arts and Crafts, Berkeley, Summer Session, 1913, 1914. At Stanford since 1892.

†**Clark, George Archibald,** PA 1024
Academic Secretary, 7 Alvarado

B. L., Minnesota, 1891, A. M., 1911. Secretary, U. S. Fur Seal Commission, 1896-98; Special Investigator, Bureau of Fisheries, Fur Seal Investigation on the Pribilof Islands, 1909, 1912, 1913. At Stanford since 1891.

†**Clark, George Thomas,** PA 526W
Librarian, 27 Alvarado

B. S., California, 1886. Assistant Librarian, University of California, 1886-87; Deputy State Librarian, California State Library, 1887-90, Classifier, 1890-94; Librarian, San Francisco Public Library, 1894-1907. At Stanford since 1907.

†**Clark, James Cameron,**
Assistant Professor of Electrical Engineering, 151 Embarcadero-p

B. S., Iowa State College, 1907; M. E. E., Harvard, 1912; Engineering Apprentice Course, Westinghouse Electric & Manufacturing Company, 1907-09; Instructor in Electrical Engineering, Case School of Applied Science, 1909-11. At Stanford since 1912.

†**Clark, William Redwood Price,** SF, Franklin 3293
Clinical Instructor in Medicine, 1547 Jackson, SF-sf

M. D., Cooper Medical College, 1899. Assistant Visiting Physician, City and County Hospital, San Francisco, 1901-04; Instructor in Medicine, Cooper Medical College, 1905-11; Visiting Physician, Clinic of the San Francisco Association for the Study and Prevention of Tuberculosis, 1909-12; Visiting Physician, City and County Tuberculosis Hospital, San Francisco, 1911-12. At Stanford since 1911.

[1]†**Clevenger, Galen Howell,** PA 809
Associate Professor of Metallurgy, 381 Hawthorne-p

B. S., South Dakota School of Mines, 1901, E. M., 1908; A. M., Columbia, 1903; Engineer, Stanford, 1906. Superintendent Tailings Plant Operating Cyanide Process, Rapid City (S. D.), 1899-1901; Assayer and Chemist, Dakota Mining Co., Deadwood (S. D.), 1901-02; Research Metallurgist, National Smelting Co., Rapid City (S. D.), and Horseshoe Mining Co., Terry (S. D.), 1903-04; Special Assistant, U. S. Geological Survey, in charge of Electric Smelting Experiments at Portland (Or.), 1904-05; Consulting Metallurgical Engineer for companies operating in the United States, Mexico, and Central America; Special Study of Hydro-Metallurgical Methods in Mexico, 1906-09. At Stanford 1904-06, and since 1909.

†**Congdon, Edgar Davidson,** PA 396R
Assistant Professor of Anatomy, 330 Coleridge-p

A. B., Syracuse, 1901, A. M., 1902; Ph. D., Harvard, 1909. Austin Teaching Fellow in Zoology, Harvard University, 1906-09; Hooper Traveling Fellow in

Zoology of Harvard University, at University of Zürich, 1909-10; Sheldon Traveling Fellow in Zoology of Harvard University, at Biologische Versuchs Anstalt and K. K. Institut für Radiumforschungen, Vienna, 1910-11; Instructor in Embryology, Cornell University Medical College, 1911-12. At Stanford since 1912.

CONNELL, JOHN TIMON, PA 1054
Instructor in Bacteriology, 14 Alvarado

B. S., Michigan, 1916. Teaching Assistant in Bacteriology and Hygiene, University of Michigan, Summer Session, 1916. At Stanford since 1916.

†COOPER, WILLIAM ALPHA, PA 593
Associate Professor of German, 35 Salvatierra

A. B., Marietta, 1892, A. M., 1897. Student, Universities of Bonn, Leipzig, and Paris, 1892-94; Instructor in German and French, Marietta College, 1895-99, Professor, 1899-1901. At Stanford since 1901.

†COOVER, JOHN EDGAR, PA 933
Fellow in Psychic Research, and
Assistant Professor of Psychology, 11 Salvatierra

A. B., Stanford, 1904, A. M., 1905, Ph. D., 1912. At Stanford since 1912.

COWAN, JOHN FRANCIS, Prospect 4827
Assistant Professor of Surgery, 1875 California, SF-sf

A. B., Stanford, 1902; M. D., Cornell University Medical College, 1910; Assistant and Acting Instructor in Physiology, Leland Stanford Junior University, 1903-06; Instructor in Physiology, Cornell University Medical College, 1906-09; Interne, New York Hospital, 1910-12, Resident Surgeon, 1912-13. At Stanford since 1913.

†CRAWFORD, ALBERT CORNELIUS, SF, Franklin 6620
Professor of Pharmacology, 701 Post, SF-sf

M. D., College of Physicians and Surgeons, Baltimore, 1893. Student at Johns Hopkins University, 1887-90, 1891-94, 1903. Assistant in Pharmacology, Johns Hopkins Medical School, 1894-1900; Pharmacologist, Bureau of Plant Industry, United States Department of Agriculture, 1904-08; Physiologist, Bureau of Animal Industry, United States Department of Agriculture, 1908-10. At Stanford since 1910.

†CROSS, CHARLES NORMAN, PA 1040W
Assistant Professor of Mechanical Engineering, 9 Salvatierra

M. E., Cornell, 1906. Assistant Engineer, Long Island State Hospital, Brooklyn (N. Y.), 1905; Dynamo and Switchboard Attendant with the New York Edison Co., New York City, 1905-06; Electrician with the Lackawanna Steel Co., Buffalo (N. Y.), 1906; with Turbine Research Department of General Electric Company, Lynn (Mass.), 1914-15. At Stanford since 1906.

†CUBBERLEY, ELLWOOD PATTERSON, PA 1019
Professor of Education, 12 Cabrillo

A. B., Indiana, 1891; A. M., Columbia, 1902, Ph. D., 1905. Instructor in Science, Ridgeville College (Ind.), 1891; Professor of Physical Science, Vincennes University (Ind.), 1891-93, President, 1893-96; Superintendent of City Schools, San Diego (Cal.), 1896-98; Honorary Fellow, Columbia University, 1901-02, 1904-05; Professor of Education, University of California, Summer Sessions, 1901, 1906, University of Chicago, Summer Quarter, 1910, Harvard University, second half-year, 1910-11; Visiting Professor, Columbia University, Summer Sessions, 1907, 1914, 1916, second half-year, 1915-16. At Stanford since 1898.

†CUSHING, OSCAR KENNEDY, SF, Pacific 987
Lecturer in Law, 37 7th av., SF-sf

†CUTTER, LAWRENCE EDMINSTER, PA 459Y
Assistant Professor of Mechanical Engineering, 627 Webster-p

A. B., Stanford, 1906. Machinist Apprentice and Journeyman, Union Iron Works, San Francisco, 1895-99, 1899-1902, 1903, 1904, Draftsman, 1905, 1906. At Stanford since 1906.

†Dailey, Morris Elmer, SJ, 1449
Lecturer in Education, San Jose-sj

A. M., Indiana, 1897; LL. D., Drake 1901. Superintendent of City Schools, Fresno (Cal.), 1897-99; Vice-President and Teacher of History, San Jose State Normal School, 1899-1900; President, since 1900.

†Davidson, Percy Erwin, PA 1442R1
Associate Professor of Education, Menlo Heights

A. B., Stanford, 1898; A. M., Harvard, 1905; Ph. D., Columbia, 1914. Teacher, Grammar and High Schools, San Diego (Cal.), 1898-1900; Supervisor of History and English Teaching, San Francisco State Normal School, 1900-03; Assistant in Education, San Diego State Normal, 1903-04; Graduate Student, Teachers' College, Columbia University, 1905-07; Instructor in Logic and History of Education, New York Training School for Teachers, 1906-07. At Stanford since 1907.

De Camp, Joseph Edgar, PA 558R
Instructor in Psychology, 251 Emerson

A. B., Arkansas College, 1905; A. M., Michigan, 1912, Ph. D., 1914. Assistant in Psychology, University of Michigan, 1912-13, and Summer Session, 1914, Fellow in Psychology, 1913-14; Assistant in Psychology, University of Illinois, 1914-15; Instructor in Psychology, University of California, 1915-16 and Summer Session, 1916. At Stanford since 1916.

†Dickson, Ernest Charles, SF, Fillmore 1271
Assistant Professor of Medicine, and
Medical Adviser of Medical Students, 2294 Broderick, SF-sf

A. B., Toronto, 1904, M. B., 1906. Assistant Demonstrator in Physiology, University of Toronto, 1904-05, George Brown Research Scholar, 1906-07; Assistant Resident Physician, Johns Hopkins Hospital, 1907-08; Instructor in Pathology and Bacteriology, Cooper Medical College, 1908-10; Fellow of the Rockefeller Institute for Medical Research, 1910-13. At Stanford since 1910.

†Dietrich, Waldemar Fenn, PA 383
Lecturer in Mining and Metallurgy, 1225 Byron-p

A. B., Stanford, 1913, Engineer, 1914. Acting Instructor in Mining, Leland Stanford Junior University, 1913-14, Engineer with Copper Queen Consolidated Mining Company, Bisbee, Ariz., 1914-15; Engineer and later Assayer with Consolidated Arizona Smelting Company, Humboldt, Ariz., 1916.

†Doane, Rennie Wilbur, PA 792R
Associate Professor of Entomology, 527 Homer-p

A. B., Stanford, 1896. Assistant in Zoology and Botany, Washington State College, 1896-99; Assistant Professor of Zoology and Entomology, 1899-1901; Superintendent Fisheries Experiment Station, Keyport (Wn.), 1901-03. At Stanford since 1905.

†Drew, Elmer Reginald, PA 362
Assistant Professor of Physics, 1321 Waverley-p

B. S., California, 1888; Ph. D., Cornell, 1903. Student, University of Chicago, 1897-98, University of Berlin, 1903-05; Assistant in Physics, University of California, 1889-92, Instructor, 1892-1902. At Stanford since 1905.

†Durand, William Frederick, PA 1076
Professor of Mechanical Engineering, 2 San Juan

Graduate U. S. Naval Academy, 1880; Ph. D., Lafayette, 1888. Engineer Corps, U. S. Navy, 1880-87; Special Duty as Assistant Professor of Mechanical Engineering, Lafayette College, 1883-85, Worcester Polytechnic Institute, 1887; Professor of Mechanics and Superintendent of Mechanical Department, Michigan State Agricultural and Mechanical College, 1887-91; Professor of Marine Engineering and Principal Graduate School of Naval Architecture and Marine Engineering, Cornell University, 1891-1904. At Stanford since 1904.

Dyer, Thomas Lafayette, PA 1013
Law Librarian, 69 Encina

A. B., Stanford, 1914. At Stanford since 1911.

†Eaton, Louis H., PA 857
Organist, 431 University av.
At Stanford since 1913.

†Eaves, James, SF, Fillmore 3446
Clinical Instructor in Surgery, 2511 Octavia, SF-sf
M. B. Ch. B., Edinburgh, 1909. Assistant, Guy's Hospital, London, 1910-11. At Stanford since 1911.

†Eckart, William Rankine, PA 227
Professor of Mechanical Engineering, 1445 Bryant-p
M. E., Cornell, 1895. Mechanical Engineer, Siemens Halske Electric Co., Chicago, 1895-96; Construction Engineer, Allison Ranch Mine, Grass Valley (Cal.), 1896-98; Testing Work for Fraser & Chalmers, in Hawaii and Mexico, 1898-99; with W. R. Eckart, Consulting Engineer, Hydraulic Power Plants and Mining Work, 1899-1903, summers of 1904-14; Consulting Engineer, Geary St. P & O. R. R., San Francisco, 1902-06, Columbia Steel Company since 1915. At Stanford since 1903.

Eldred, Wilfred,
Instructor in Economics, 21 Salvatierra
A. B. and A. M., Washington and Lee, 1909; A. M., Harvard, 1911. Thayer Scholar, Harvard University, 1910-11, Harris Fellow, 1911-12, Instructor in Economics, 1912-14; Instructor in History and Economics, San Diego High School and Junior College, 1914-15. At Stanford since 1915.

†Elliott, Orrin Leslie, PA 1045
Registrar, 5 Cabrillo
Ph. B., Cornell, 1885, Ph. D., 1890. Fellow in History and Political Science, Cornell University, 1885-86, Instructor in English, 1886-91, Assistant Registrar and President's Secretary, 1890-91. At Stanford since 1891.

[2]†Elmore, Jefferson, PA 1114X
Associate Professor of Latin, 1134 Emerson-p
A. B., Stanford, 1895, A. M., 1895, Ph. D., 1901. Principal of Merced County High School, 1895-97; Student, Universities of Bonn and Berlin, 1901-02. At Stanford since 1898.

Eloesser, Leo, SF, Sutter 326
Assistant Clinical Professor of Surgery, 135 Stockton, SF-sf
B. S., University of California, 1900; M. D., Heidelberg, 1907. Volunteer Assistant, Surgical Clinic, Heidelberg, 1906; Assistant, Cancer Institute, Heidelberg, 1906-07; Volunteer Assistant, Royal Surgical Clinic, Kiel, 1908-09; Volunteer Assistant, August Hospital, Berlin, 1909; Assistant in Surgery, University of California, 1910-12; Surgeon to Reserve Hospitale Ettlingen and Reserve Hospital III, IV, V, Karlsruhe, 1915-16. At Stanford since 1913.

†Ely, Leonard Wheeler, PA 864
Associate Professor of Surgery (Orthopedics), 657 Cowper-p
A. B., Columbia, 1889; M. D., College of Physicians and Surgeons, Columbia University, 1895. At Stanford since 1913.

†Espinosa, Aurelio Macedonio, PA 998
Assistant Professor of Romanic Languages, 543 Middlefield
A. B., Colorado, 1902, A. M., 1904; Ph. D., Chicago, 1909. Assistant in Romance Languages, University of Colorado, 1901-02, Instructor, Summer Terms, 1904, 1905; Professor of Romance Languages, University of New Mexico, 1902-10; Fellow in Romance Languages and Instructor in Spanish, University of Chicago, 1908-09; Lecturer in Spanish Literature, Summer Sessions, University of Chicago, 1914, University of California, 1912, 1915; Associate Editor, Revue de Dialectologie Romane and of Journal of American Folk Lore, since 1914. At Stanford since 1910.

†Evans, George Fullerton, PA 417M
Instructor in English, 203 Addison-p
A. B., Harvard, 1905, A. M. and S. T. B., 1909.

†Faber, Harold Kniest, SF, Fillmore 4858
Assistant Professor of Medicine (Pediatrics),
1875 California, SF-sf

A. B., Harvard, 1906; M. D., Michigan, 1911. Medical Interne, New York Hospital, 1911-13; Resident Pathologist, Babies' Hospital, New York, 1913-14; Fellow, Rockefeller Institute, New York, 1914-15. At Stanford since 1915.

†Fairclough, Henry Rushton, PA 1028W
Professor of Latin, 22 Alvarado

A. B., Toronto, 1883, A. M., 1886; Ph. D., Johns Hopkins, 1896. Fellow in Classics, University College, Toronto, 1883-84; Classical and English Master, Brockville High School, 1884-86; Graduate Scholar, Johns Hopkins University, 1886-87, Fellow, 1887; Lecturer in Greek and Ancient History, University College, Toronto, 1887-93; Professor of Latin, University of Wisconsin, Summer Session, 1906, Columbia University, Summer Session, 1908, University of Chicago, Summer Quarter, 1910; Professor of Latin, American School of Classical Studies, Rome, 1910-11. At Stanford since 1893.

†Fish, John Charles Lounsbury, PA 308
Professor of Railroad Engineering, 1101 Emerson

C. E., Cornell, 1892. Instructor in Civil Engineering, Cornell University, 1892-93; Division Engineer, Lake Shore and Michigan Southern Railway, 1906-08. At Stanford since 1893.

Fisher, Walter Kenrick,
Assistant Professor of Zoology, 1525 Waverley-p

A. B., Stanford, 1901, A. M., 1903, Ph. D., 1906. Assistant, U. S. Biological Survey, 1897-1901, 1903; Assistant, U. S. Fish Commission, 1902. At Stanford since 1902.

[2]†Folsom, David Morrill, PA 429
Associate Professor of Mining, 320 Embarcadero-p

A. B., Stanford, 1902, Engineer, 1904. Student Columbia School of Mines, 1902-03; Engineer with Boston and Montana Consolidated Copper and Silver Mining Co., 1904-09. At Stanford since 1910.

†Foss, John Harrison, PA 757M
Assistant Professor of Civil Engineering, 327 Emerson-p

A. B. Stanford, 1903. Assistant Engineer, Hamakua Ditch, Huelo, Maui (Hawaiian Islands), 1903-04, Engineer, 1904-05; Engineer, Maui Agricultural Co., Paia, Maui, 1905-07; Engineer Honolua Ditch, Honokohau, Maui, 1912-13. At Stanford since 1907.

†Foster, Benjamin Oliver, PA 767W
Associate Professor of Latin, 1445 Tasso-p

A. B., Stanford, 1895; A. M., Harvard, 1897, Ph. D., 1899. Parker Fellow of Harvard University, studying in the American School of Classical Studies in Rome, 1899-1900; Acting Professor of Latin and Greek, State Normal College of Michigan, 1900-01; Instructor, University of California, Summer Session, 1908. At Stanford since 1901.

†Franklin, Edward Curtis, PA 216
Professor of Chemistry, 1057 Ramona-p

B. S., Kansas, 1888, M. S., 1890; Ph. D., Johns Hopkins, 1894. Chemist to the Palo Alto Plantation and Sugar Factory, Donaldsonville (La.), 1888; Chemist to the Bella Vista Mining and Milling Co., Los Quemados, Costa Rica, 1897; Instructor in Chemistry, University of Kansas, 1888-90; Student, University of Berlin, 1890-91; Assistant in Chemistry, University of Kansas, 1891-93, Associate Professor, 1894-99, Professor of Physical Chemistry, 1899-1903; Member of the U. S. Assay Commission, 1907; Chief of the Division of Chemistry, U. S. Public Health Service, Washington, D. C., 1911-13. At Stanford since 1903.

†Gardner, David Charles, PA 1068
Chaplain, 1a Alvarado

Graduate, Church Divinity School of the Pacific, 1897. Curate, St. James Mission, San Francisco, 1898; Rector of All Saints Church, Palo Alto, 1898-1902. At Stanford since 1902.

†Garfias, Valentine Richard,
Instructor in Geology and Mining, 515 University

A. B., Stanford, 1907, A. M., 1912. Maintenance of Way Department, Southern Pacific Company, 1907-08; Assistant in Civil Engineering, Leland Stanford Junior University, 1910; Geologist and Petroleum Engineer with Ralph Arnold, 1910-15; Consulting Petroleum Engineer, U. S. Bureau of Mines, since 1915; Engineer, Montebello Oil Co., 1915. At Stanford since 1915.

Garver, Frederic Benjamin, PA 1031J
Assistant Professor of Economics, 25 Alvarado

A. B., Nebraska, 1909. Graduate Student, University of Wisconsin, 1909-10; Special Agent, Wisconsin Tax Commission, 1910; Fellow in Political Economy, University of Chicago, 1910-11, Assistant, 1911-12; Graduate Student, Harvard University, 1912-13; Instructor in Political Economy, University of Chicago, 1912-14. At Stanford since 1914.

†Gibbons, Henry Walter, SF, Fillmore 3740
Clinical Instructor in Obstetrics and Gynecology,
3491 Pacific SF-sf

B. S., University of California, 1899; M. D., Cooper Medical College, 1902. Instructor in Pathology, Cooper Medical College, 1905-07; Instructor in Gynecology, 1907-11. At Stanford since 1912.

Gilbert, Charles Henry, PA 258
Professor of Zoology, 433 Melville

B. S., Butler University, 1879; M. S., Indiana, 1882, Ph. D., 1883, Assistant in Natural Sciences and Modern Languages, Indiana University, 1880-84; Professor of Natural History, University of Cincinnati, 1884-89; Professor of Zoology, Indiana University, 1889-91; Assistant to the U. S. Bureau of Fisheries, since 1880; Assistant, in charge of scientific explorations of the U. S. S. "Albatross," 1889, 1890, 1902, 1904, 1906; in charge salmon investigations for British Columbia since 1912. At Stanford since 1891.

†Gilman, Philip Kingsnorth, SF, Fillmore 4274
Clinical Instructor in Surgery, 2226 Clay, SF-sf

A. B., Stanford, 1901; M. D., Johns Hopkins, 1905. Assistant Resident Surgeon, Johns Hopkins Hospital, 1905-07; Assistant Professor of Pathology, Philippine Medical School, 1907-08; Assistant Professor of Surgery, College of Medicine and Surgery, University of the Philippines, 1908-12, Professor of Surgery and Chief of Department, 1912-16; Chief Surgeon, Philippine General Hospital, 1912-16. At Stanford since 1916.

Girard, Frank Robert, SF, Sutter 7200
Clinical Instructor in Obstetrics and Gynecology,
Hotel Plaza, SF-sf

M. D., California, 1903. Volunteer Assistant Koenigliches Krankenhaus, Berlin, Germany, 1905-06; House Pathologist and House Surgeon, St. Luke's Hospital, New York, 1906-08; Assistant Resident Physician, Sloane Maternity Hospital, New York, 1908-09. At Stanford since 1914.

Graham, Harrington Bidwell, SF, Sutter 1535
Assistant Clinical Professor of Surgery (Otology),
240 Stockton, SF-sf

B. S., California, 1896, M. D., 1899. Superintendent of Waldeck Sanitarium, 1899; Assistant in Surgery, San Francisco Polyclinic, 1904; Assistant, Ear, Nose, and Throat Clinic, Cooper Medical College, 1910-11. At Stanford since 1912.

†Grass, Donald Frederick, PA 520J
Assistant Professor of Economics, 170 Waverley-p

Ph. B., Grinnell, 1894; A. B., Harvard, 1898, A. M., 1899; Ph. D., Stanford, 1914. Instructor in History and Economics, Council Bluffs (Ia.) High School, 1894-97, 1906-08; Professor of History and Economics, Tabor College, 1908-10. At Stanford since 1910.

†GRAY, HENRY DAVID, PA 1042R
Associate Professor of English, 22 Alvarado

Ph. B., Colgate, 1897; A. M., Columbia, 1898, Ph. D., 1904. Assistant in German and French, Colgate Academy, 1896-97; University Scholar, Columbia University, 1898-1900; Instructor in Dramatic Literature, American Academy of Dramatic Arts, 1900-02; Instructor in English, University of Texas, 1902-05; Lecturer in English, Columbia University, Summer Session, 1905, University of Oregon, Summer Session, 1910, University of Illinois, Summer Session, 1912. At Stanford since 1905.

†GREEN, RUFUS LOT, PA 1127J
Professor of Mathematics, 13 Salvatierra

B. S., Indiana, 1885, A. M., 1889. Instructor in Mathematics, Indiana University, 1885-86, Assistant Professor, 1886-88, Associate Professor, 1889-91, Professor of Pure Mathematics, 1891-93; Student, Johns Hopkins University, 1886-87. At Stanford since 1893.

†GRIFFIN, JAMES OWEN, PA 1054
Professor of German, 14 Alvarado

Graduate of the Pennsylvania State Normal School, 1873. Teacher in Pennsylvania State Normal School, 1873-74; Principal Unadilla (N. Y.) Academy, 1874-79; Student, University of Göttingen, 1879-80; Principal of Delaware Academy (Delhi, N. Y.), 1880-85; Instructor in German, Cornell University, 1885-91, Registrar, 1890-91. At Stanford since 1891.

†GROJEAN, GABRIEL HENRY,
Instructor in French, 1212 Byron

B. A. and B. S., University of Lille (France), 1892-93; J. D., University of Toulouse, 1898, Licencié-ès-Lettres, 1900. Lecturer in Germany, Student of University of Königsberg and in Italy, Teacher of Modern Languages in French high schools, 1911; Instructor in Romanic Languages, University of Pennsylvania, 1913. At Stanford since 1914.

HADDEN, ELIZABETH, PA 485M
Chief of Order Department, Library 549 Cowper-p

At Stanford since 1901.

†HALL, HOWARD JUDSON, PA 517W
Assistant Professor of English, 1015 Forest Court-p

B. S., Michigan State Agricultural College, 1890; A. B., Stanford, 1896; A. M., Harvard, 1900. Professor of English and Librarian, University of Arizona, 1891-1904. At Stanford since 1904.

†HARCOURT, ROBERT HENRY, PA 753J
Instructor in Forge Practice, 559 Everett-p

Blacksmith with Risdon Iron Works, San Francisco, 1898-1901, 1903-04; with Hammond Car and Elevator Company, San Francisco, 1901-02, 1904-05; with National Iron Works, San Francisco, 1902-03; with Abner Doble Steel Company, San Francisco, 1905-06, Foreman of Forge Shop, 1906-07. At Stanford since 1907.

HAYS, ALICE NEWMAN, PA 1052J
Reference Librarian, 3 Alvarado

A. B., Stanford, 1896; B. L. S., New York State Library School, 1903; Assistant Home Education Department, New York State Library, 1901. At Stanford since 1901.

†HEATH, HAROLD, PA 434J
Professor of Zoology, 1147 Ramona-p

A. B., Ohio Wesleyan, 1893; Ph. D., Pennsylvania, 1898. Assistant in Biology, Ohio Wesleyan University, 1891-93; Professor of Biology, University of the Pacific, 1893-94; Harrison Fellow in Zoology, University of Pennsylvania, 1896-98. At Stanford since 1894.

†Hempl, George, PA 617
Professor of Germanic Philology, 609 Kingsley-p

A. B., Michigan, 1879; Ph. D., Jena, 1889; LL. D., Wisconsin, 1904. Principal, Saginaw (Mich.) H. S., 1879-82, La Porte (Ind.) H. S., 1882-84; Instructor in German, Johns Hopkins University, 1884-86; Student, Universities of Göttingen, Tübingen, Strassburg, Jena, and Berlin, 1886-89; Assistant Professor of English, University of Michigan, 1889-93, Junior Professor, 1893-97, Professor of English Philology and General Linguistics, 1897-1906; Professor of English, University of Chicago, Summer Quarter, 1897; President of the American Dialect Society, 1900-05; President of the Modern Language Association, 1902-03; President of the American Philological Association, 1903-04 At Stanford since 1906.

†Hewlett, Albion Walter, SF, Franklin 1914
Professor of Medicine, 1814 Vallejo, SF-sf

B. S., University of California, 1895; M. D., Johns Hopkins, 1900. Assistant Professor of Theory and Practice of Medicine, Cooper Medical College, 1906-08; Professor of Internal Medicine, University of Michigan, 1908-16. At Stanford since 1916.

[†Hill, Frank Ernest,
Instructor in English, New York, N. Y.]

A. B., Stanford, 1911, A. M., 1914. Assistant in English, University of Illinois, 1912-13. At Stanford since 1913.

Hill, Harold Phillips, SF, West 967
Associate Clinical Professor of Medicine, 2336 Steiner, SF-sf

A. B., Stanford, 1898; M. D., University of California, 1901. Assistant in Physiology, Department of Medicine, University of California, 1899-1901, Instructor, 1901-03; Assistant Visiting Physician, St. Luke's Hospital, 1903-06, Visiting Physician, since 1906. At Stanford since 1912.

[2]†Hill, Henrie Granville, San Jose 2265L
Lecturer in Law, 715 W. Julian, San Jose-sj

A. B., Stanford, 1909, J. D., 1911.

†Hoffman, Ural N., PA 1140
Instructor in English, 846 Bryant-p

A. B., Trinity College (Durham, N. C.). At Stanford since 1916.

†Hoisholt, Andrew William, Napa 294
Clinical Professor of Medicine, State Hospital, Napa-n
(Psychiatry),

M. D., Cooper Medical College, 1882; M. D., University of Heidelberg, 1884. Adjunct to chair of Physiology, Cooper Medical College, 1891-95; Assistant Physician, State Hospital, Stockton, 1889-1913; Superintendent Napa State Hospital, since 1913. At Stanford since 1912.

Holsclaw, Florence Mabel, SF, Prospect 3700
Assistant Clinical Professor of Medicine, 1373 Clay, SF-sf
(Pediatrics),

A. B., Stanford, 1894; M. D., Cooper Medical College, 1897. Assistant in Pediatrics, Cooper Medical College, 1900-11. At Stanford since 1912.

†Hoskins, Leander Miller, PA 75
Professor of Applied Mathematics, 365 Lincoln-p

B. C. E. and B. S., Wisconsin, 1883, M. S., 1885, C. E., 1887. Instructor in Engineering, University of Wisconsin, 1885-89, Assistant Professor of Mechanics, 1889-91, Professor of Theoretical and Applied Mechanics, 1891-92. At Stanford since 1892.

†Huston, Charles Andrews, PA 1062
Professor of Law and Dean of the Law School, 21 Salvatierra

A. B., Chicago, 1902, J. D., 1907· S. J. D., Harvard, 1913. Fellow in Political

Economy, University of Chicago, 1902-03; Assistant in Rhetoric, 1903-04; Associate in Rhetoric, 1904-06; Professor of Law, University of Chicago, Summer Quarter, 1914, Columbia University, Summer, 1916. At Stanford since 1906.

ICHIHASHI, YAMATO, PA 932
Instructor in Japanese History and Government, 1010 Emerson

A. B., Stanford, 1907. A. M., 1908; Ph. D., Harvard, 1914. Assistant in Economics, Leland Stanford Junior University, 1908-10; Special Agent for U. S. Immigration Commission, 1908-10; Graduate Student, Harvard University, 1910-12, Henry Bromfield Roger Memorial Fellow in Sociology, 1911-12. At Stanford since 1913.

INMAN, THOMAS GEORGE, SF, Pacific 7036
Clinical Instructor in Medicine (Neurology), 4547 California, SF-sf

Ph. G., California College of Pharmacy, 1892; M. D., Cooper Medical College, 1894. Assistant Demonstrator of Anatomy, Cooper Medical College, 1895-1900, Instructor in Applied Anatomy, 1900-11; Assistant Surgeon, St. Luke's Hospital, San Francisco, 1906-13, Visiting Neurologist, since 1915.

†JOHNSON, ALVIN SAUNDERS, PA 832
Professor of Economics, 430 Kingsley-p

A. B., Nebraska, 1897, A. M., 1898; Ph. D., Columbia, 1902. Reader in Economics, Bryn Mawr College, 1901-02; Tutor, Instructor, and Adjunct Professor of Economics, Columbia University, 1902-06; Professor of Economics, University of Nebraska, 1906-08; Professor of Economics, University of Texas, 1908-10; Acting Associate Professor of Economics, University of Chicago, Summer and Fall Quarters, 1909, Associate Professor, 1910-11; Professor of Economics, Cornell University, 1912-16. At Stanford 1911-12 and since 1916.

†JOHNSTON, OLIVER MARTIN, PA 1040R
Professor of Romanic Languages, 4 Alvarado

A. B., Mississippi College, 1890, A. M., 1892; Ph. D., Johns Hopkins, 1896. Principal, Preparatory Department, Mississippi College, 1890-91, Professor of English, 1891-93; Fellow in Johns Hopkins University, 1895-96; Lecturer in French Philology, Bryn Mawr College, 1896-97. At Stanford since 1897.

KELLER, LENA MARGUERITE, PA 417J
Reviser, Catalogue Department, Library, 233 Addison-p

A. B., Cornell, 1903. Student New York State Library School, 1905; with Library of Congress, 1906-12. At Stanford since 1912.

[†KELLOGG, VERNON LYMAN,
Professor of Entomology, In Europe]

B. S., Kansas, 1889, M. S., 1892. Student, Cornell University, 1891, University of Leipzig, 1893; Assistant Professor of Entomology, University of Kansas, 1890-93, Associate Professor, 1893-94. At Stanford since 1894.

†KELLOGG, WILFRED HARVEY, SF, Fillmore 1751
Clinical Instructor in Hygiene and Public Health, 2820 Vallejo, SF-sf

Ph. G., California, 1892, M. D., 1896. Bacteriologist, San Francisco Health Department, 1900-03; State Bacteriologist, California, 1908; Acting Assistant Surgeon, U. S. Public Health Service detailed for plague investigations in Venezuela, 1909-11; Director of Laboratories, Department of Public Health, San Francisco, since 1912. At Stanford since 1914.

†KENNEDY, ARTHUR GARFIELD, PA 474R
Instructor in English Philology, 1527 Waverley-p

A. B., Doane College, 1902; A. M., Nebraska, 1905; Ph. D., Stanford, 1914. At Stanford since 1914.

†KIRKWOOD, MARION RICE, PA 436M
Associate Professor of Law, 1325 Bryant-p

A. B., Stanford, 1909, J. D., 1911. Student, Harvard Law School, 1909-10; Assistant Professor of Law, University of Oklahoma, 1911-12. At Stanford since 1912.

Knoch, Charlotte A., PA 1040M
Instructor in German, 7 Salvatierra

A. B., Stanford, 1897. Student, University of Göttingen, 1894, University of Berlin, 1913-14; Teacher in Los Angeles Schools, 1890-93; in charge of Modern Languages, Pasadena High School, 1898-1902, Vice-Principal and Head of Modern Languages, 1902-11, of Modern and Ancient Languages, 1911-13. At Stanford since 1914.

Knollin, Ernesto Ray, PA 1159
Instructor in Physical Training, Encina

A. B. Stanford, 1914.

†Kohs, Samuel C.,
Buckel Fellow in Education, 751 Webster

B. S., College of the City of New York, 1912. Fellow in Psychology, with Dr. H. H. Goddard, Vineland (N. J.) Training School for the Feeble Minded, 1912-13; Fellow in Psychology and Director of Clinic for Exceptional Children, Clark University, 1913-14; Psychologist, House of Correction, Chicago, 1914-16.

†Krehbiel, Edward, PA 1129
Professor of History, 29 Salvatierra

A. B., Kansas, 1902; Ph. D., Chicago, 1906. Graduate Student, University of Chicago, 1902-06, Fellow, 1903-05, Assistant 1904-06; Graduate Student, Harvard University, 1904; Student, Ecole de Chartes, Paris, 1905; Instructor, University of Chicago High School, 1905-06; Assistant in History, University of Chicago, 1906-07, Instructor, 1907-09. At Stanford since 1909.

†Langnecker, Harry Leslie, PA 854
Clinical Instructor in Surgery (Orthopedic) 505 Embarcadero-p

A. B., Stanford, 1901; M. D., Johns Hopkins, 1906. Orthopedic House Officer, Massachusetts General Hospital, 1908, Assistant to Orthopedic Surgeon, 1909. At Stanford since 1915.

Larremore, Thomas Armitage, PA 728J
Instructor in Law, 262 Kingsley-p

A. B., Yale, 1911; LL. B., Columbia, 1916. At Stanford since 1916.

†Lenox, Lionel Remond, Mt. View 47
Professor of Analytical Chemistry, Mountain View

Ph. B., Columbia, 1888. Assistant Chemist, Bethlehem Steel Co., 1887; Instructor in Chemistry, Lehigh University, 1888-91; Chemist, Ordnance Department, U. S. N., Washington (D. C.), 1891-92; Chief Chemist, Conkling Iron Co., 1888-92; Chemist, Allan Cement Co., 1890-91. At Stanford since 1892.

†Lesley, Everett Parker, PA 253
Associate Professor of Mechanical Engineering, 807 Waverley-p

A. B., Stanford, 1897; M. M. E., Cornell, 1905. Apprentice and Foreman in Union Iron Works, San Francisco, 1897-1903. Assistant Inspector to Naval Constructor, 1903-04; Draftsman at U. S. Experimental Model Basin, Washington (D. C.), 1905-07. At Stanford since 1907.

†Liggett, James Bennett, PA 533R
Instructor in Foundry Practice, 445 Forest-p

Apprentice and Foundry Moulder, Falls Rivet and Machine Co., Cuyahoga Falls (Ohio), 1883-88, Webster, Camp & Lane, Akron (Ohio), 1888-93, Bowler & Co., Cleveland (Ohio), 1893-98, Cleveland Steel Casting Co., 1898-99; Foreman, Born Steel Range Co., Cleveland (Ohio), 1899-1902, Westinghouse Electric Co., Cleveland (Ohio), 1902. At Stanford since 1902.

Lothrop, Margaret Mulford, PA 1028W
Instructor in Economics, 6 Cabrillo

A. B., Smith, 1905; A. M., Stanford, 1915. At Stanford since 1915.

†Lyman, George Dunlap, SF, Fillmore 3456
Assistant Clinical Professor of Medicine (Obstetrics and Gynecology), 3647 Wash., SF-sf

A. B., Stanford, 1905; M. D., Columbia, 1909. House Physician, Bellevue Hospital, New York, 1909-11. At Stanford since 1912.

McCracken, Isabel,
Assistant Professor of Entomology, 1 Arguello

A. B., Stanford, 1904, A. M., 1905, Ph. D., 1908. At Stanford since 1904.

†McDowell, John Ezra, PA 1044
Assistant Registrar and Alumni Secretary, 10 Cabrillo

A. B., Stanford, 1900. At Stanford since 1900.

†McFarland, Frank Mace, PA 480
Professor of Histology, 2 Cabrillo

Ph. B., De Pauw, 1889, A. M., Stanford, 1893; Ph. D., Würzburg, 1896. Professor of Biology and Geology, Olivet College, 1889-92; Student Würzburg, Zürich, and Naples, 1894-96. At Stanford since 1892.

†McKee, Albert Brown, R 1703J11
Clinical Professor of Surgery (Ophthalmology), Redwood City-r

Ph. B., University of the Pacific, 1883, Ph. M., 1886; M. D., Cooper Medical College, 1886. Instructor and Acting Head of the Eye, Ear, Nose, and Throat Division, University of California Medical Department, 1902-08; Associate Professor of Ophthalmology, Cooper Medical College, 1908-12. At Stanford since 1912.

†McMurphy, James Ira Wilson,
Instructor in Botany, College Terrace

A. B., Stanford, 1908, A. M., 1909. At Stanford since 1908.

McNaught, Howard Young, SF, West 3057
Clinical Instructor in Surgery (Otology), 2299 Sacramento, SF-sf

M. D. C. M., Trinity University, 1897. Fellow by Examination, Trinity Medical College, 1897; Assistant, Ear, Nose, and Throat Clinic, Cooper Medical College, 1911-12. At Stanford since 1913.

†Maloney, Henry Wilfred, PA 696
Instructor in Physical Training, 176 Waverley-p

†Manning, William Albert, PA 689R
Associate Professor of Applied Mathematics, 604 Tennyson-p

A. B., Willamette University, 1900; A. M., Stanford, 1902, Ph. D., 1904. Student, University of Paris, 1904-05; Acting Assistant Professor of Mathematics, University of Illinois, 1909-10. At Stanford since 1900.

Manwaring, Wilfred Hamilton,
Professor of Bacteriology and Immunology,
Hotel Vendome, San Jose-sj

B. S., Michigan, 1895; M. D., Johns Hopkins, 1904. Instructor in Physiology, State Normal School, Winona, Minn., 1898-1901; Fellow and Assistant in Pathology, University of Chicago, 1904-05, and Summer Quarter, 1906; Associate Professor of Pathology and Bacteriology, Indiana University, 1905-07; Traveling Fellow in Pathology and Bacteriology, Rockefeller Institute, 1907-08, Assistant, 1910-13; Research worker, Emil Fischer's Laboratory and v. Wassermann's Laboratory, Berlin, 1907-08, Pathological Institute, Leipzig, and Ehrlich's Laboratory, Frankfort-on-Main, 1908-09, Physiological Institute, London, and Lister Institute of Preventive Medicine, London, 1909-10. At Stanford since 1913.

†Martin, Ernest Gale, PA 569
Professor of Physiology, 14 Salvatierra

Ph. B., Hamline, 1897; Ph. D., Johns Hopkins, 1904. Assistant in Biology, Hamline University, 1896-97; Fellow in Physiology, Johns Hopkins University, 1902-03, Assistant, 1903-04; Instructor in Anatomy and Physiology, Purdue University, 1904-06; Instructor in Physiology, Harvard University, 1906-10, Assistant Professor, 1910-16; Instructor in Physiology, Simmons College, 1907-08; Lecturer in Physiology, Sargent School for Physical Education, 1906-14; Assistant Professor of Physiology, Radcliffe College, 1914-16. At Stanford since 1916.

†MARTIN, ERNEST WHITNEY, PA 132
Associate Professor of Greek, 525 Lincoln-p

A. B., Chicago, 1900; A. M., Stanford, 1902, Ph. D., 1910. Instructor in Latin and Greek, Private School, Clarinda (Ia.), 1895-96, Principal of High School, 1896-98; Student, University of Berlin, and American School of Classical Studies, Rome, 1900-01; Acting Professor of Latin and Greek, University of Nevada, 1908-09, Professor of Greek, 1909-10. At Stanford since 1901.

†MARTIN, PERCY ALVIN, PA 455M
Assistant Professor of European History, 380 Kingsley

A. B., Stanford, 1902, A. M., 1903; A. M., Harvard, 1907, Ph. D., 1912. Student, University of Paris, 1903-04, Universities of Berlin and Leipzig 1907-08; Fellow, Harvard University, 1908; Professor of History and French, Whittier College, 1904-05; Lecturer in Latin-American History, Harvard University, 1915; Lecturer in South American History and Institutions, University of Washington, Summer Session, 1916. At Stanford since 1908.

†MARX, CHARLES DAVID, PA 255
Professor of Civil Engineering, 357 Kingsley

B. C. E., Cornell, 1878; C. E. Karlsruhe Polytechnicum, 1881. Instructor in Civil Engineering, Karlsruhe Polytechnicum, 1880-81; U. S. Assistant Engineer, Missouri River Improvement, 1882-84; Assistant Professor of Civil Engineering, Cornell University, 1884-90; Professor of Civil Engineering, University of Wisconsin, 1890-91. At Stanford since 1891.

†MARX, GUIDO HUGO, PA 715
Professor of Machine Design, 356 Lincoln

M. E., Cornell, 1893. With Gleason Tool Co., Rochester (N. Y.), 1893-94; with Bement, Miles & Co., Philadelphia, 1894-95. At Stanford since 1895.

†MEYER, ARTHUR WILLIAM, PA 335W
Professor of Anatomy, 121 Waverley-p

B. S., Wisconsin, 1898; M. D., Johns Hopkins, 1905; Assistant and Instructor in Anatomy, Johns Hopkins University, 1905-07; Assistant Professor of Anatomy, University of Minnesota, 1907-08; Professor of Anatomy, Northwestern University, 1908-09. At Stanford since 1909.

†MILLER, STEPHEN IVAN, JR., PA 813
Assistant Professor of Economics, 374 Kingsley

LL. B., University of Michigan, 1896; A. B., Stanford, 1898. Student at Heidelberg, 1900-02, University of Michigan, 1902-03; Quiz-Master, University of Michigan, 1903-04; Instructor in Economics and History, Pasadena High School, 1905-07; in United States Forest Service, 1908-10; Instructor in Economics, Los Angeles Polytechnic High School, 1910-12. At Stanford since 1912.

[MIRRIELEES, EDITH RONALD,
Instructor in English, New York, N. Y.]

A. B., Stanford, 1907. At Stanford since 1909.

†MITCHELL, JOHN PEARCE, PA 722
Associate Professor of Chemistry, 235 Embarcadero

A. B., Stanford, 1903, A. M., 1904, Ph. D., 1909. Student, University of Leipzig, 1904-05. At Stanford 1903-04, and since 1905.

†Moore, Chester Biven, SF, Fillmore 922
Clinical Instructor in Obstetrics and Gynecology,
2327 Divisadero, SF-sf

B. S., California, 1906, M. D., 1910. Interne, University of California Hospital, 1909-11; House Officer, Children's Hospital, Boston, 1911-12. At Stanford since 1913.

†Moreno, Halcott Cadwalader, PA 526J
Associate Professor of Applied Mathematics, 28 Alvarado

A. B., University of Georgia, 1893, A. M., 1894, B. L., 1896; Ph. D., Clark, 1900. Tutor in Mathematics, University of Georgia, 1893-97; Scholar and Fellow in Mathematics, Clark University, 1897-1900, Assistant in Mathematics, Clark University, 1900-01. At Stanford since 1901.

†Moser, Charles, PA 592J
Instructor in Civil Engineering, 651 Homer-p

C. E., Ohio Northern University, 1902; A. B., Stanford, 1908. At Stanford since 1908.

Mosher, Clelia Duel, PA 23
Assistant Professor of Personal Hygiene and Medical Adviser of Women, 1094 Emerson

A. B., Stanford, 1893, A. M., 1894; M. D., Johns Hopkins, 1900. Assistant in Hygiene and Physical Training, Leland Stanford Junior University, 1893-94, Instructor, 1894-96; Externe in the Johns Hopkins Hospital Dispensary, and Gynecological Assistant in Dr. Howard A. Kelly's Sanatorium, Baltimore (Md.), 1900-01; Physician, Palo Alto, 1901-10. At Stanford 1893-96 and since 1910.

†Mulock, Fred S.,
Instructor in Electrical Engineering, 528 University-p

A. B., Stanford, 1915. At Stanford since 1915.

†Murray, Augustus Taber, PA 481M
Professor of Greek, 1019 Bryant

A. B., Haverford, 1885; Ph. D., Johns Hopkins, 1890. Fellow in Johns Hopkins University, 1887-88; Professor of Greek, Earlham College, 1888-90; Student, Universities of Leipzig and Berlin, 1890-91; Professor of Greek, Colorado College, 1891-92. At Stanford since 1892.

Oliver, Harry Reeves, SF, Fillmore 1720
Assistant Clinical Professor of Medicine (Serology),
2749 Union, SF-sf

M. D., Cooper Medical College, 1898. Assistant in Pathology, Cooper Medical College, 1898-1904, Instructor, 1904-06, Assistant Professor, 1906-11, Associate Professor of Clinical Pathology, 1911-12, Serologist, 1912. At Stanford since 1909.

†O'Neill, Arthur Aloysius, SF, Mission 238
Clinical Instructor in Medicine, Army and De Haro, SF-sf

M. D., Cooper Medical College, 1891. Assistant Surgeon, Cooper Medical College Clinic, 1893; Assistant in Diseases of the Skin, San Francisco Polyclinic, since 1902; in charge of Isolation and Plague Hospital, 1907-10, of Isolation Hospital, 1912. At Stanford since 1913.

Ophüls, Louise, SF, West 2892
Medical Librarian, Lane Medical Library, 2186 California, SF-sf
At Stanford since 1910.

†Ophüls, William, SF, Fillmore 1680
Acting Dean of the Medical School, and Professor of Pathology,
114 Walnut, SF-sf

M. D., University of Göttingen, 1895. Assistant at the Pathologic Institute at Göttingen, 1896-97; Professor of Pathology and Bacteriology, University of Missouri, 1897-98; Professor of Pathology and Bacteriology, Cooper Medical College, 1898-1912; Pathologist, Lane Hospital, since 1898. At Stanford since 1909.

†PALMATEER, THERON J.,
Instructor in Machine Shop Practice, 171 E.Oxford,Mayfield-m

Apprentice with Sibley & Ware, South Bend (Ind.); Journeyman Machinist, 1896-1905, with R. Hoe & Co., New York, Columbus Machine Works, Columbus, O., Elems Engineering Works, Chicago, Western Gas Engine Works, Mishawaka, Ind., Webster Iron Works, Bakersfield, Cal., R. S. Hunkins, San Jose, Cal. At Stanford since 1904.

PALMER, CAROLINE B., SF, West 6523
Clinical Instructor in Surgery (Anesthetics), 2404 Clay, SF-sf

PARIS, ETTA LOUISE, PA 1005
Instructor in Roble Gymnasium, 60 Roble Hall

Graduate, Sargent's School for Physical Education, 1908; Student of Mme. Zeniné, and of Gilbert School of Dancing, Boston; Teacher of Physical Training, Y. W. C. A., Indianapolis (Ind.), 1908-10, Columbia College of Expression, 1910-11, Durant Gymnasium, 1911-12. At Stanford since 1913.

PARK, CHARLES V., PA 613W
Assistant Librarian, 405 Kipling

A. B., Stanford, 1909; Certificate, New York Public Library, Library School, 1915. At Stanford since 1909.

†PEIRCE, GEORGE JAMES, PA 436J
Professor of Botany and Plant Physiology, 281 Embarcadero

S. B., Harvard, 1890; A. M. and Ph. D., Leipzig, 1894. Assistant in Botany, Harvard University and Radcliffe College, 1890-92; Parker Fellow in Harvard University, studying in Bonn, Leipzig, and Munich, 1892-94; Assistant Professor of Botany, Indiana University, 1895-97; Acting Professor of Botany, University of Wisconsin, second semester, 1910-11. At Stanford since 1897.

[1]PEIXOTTO, JESSICA BLANCHE, Berkeley 3757
Lecturer in Economics, Cloyne Court, Berkeley-b

Ph. B., California, 1894, Ph. D., 1900.

*PELLISSIER, ROBERT EDOUARD,
Assistant Professor of French,

B. S., Harvard, 1904, A. M., 1909, Ph. D., 1913. Shattuck Scholar in Romance Languages, Harvard University, 1910-11. At Stanford 1909-10, and 1911-16.

†PETERSON, HARRY C., PA 395J
Curator of the Museum, 672 Homer-p

Charter Member American Association of Museums; Member Board of Directors and State Secretary California Historic Landmarks Club. At Stanford since 1900.

†PONZER, ERNEST WILLIAM, PA 269J
Assistant Professor of Applied Mathematics, 939 Cowper-p

B. S., Illinois, 1900, M. S., 1903. Instructor in Mathematics, University of Illinois, 1900-09. At Stanford since 1909.

†PORTER, LANGLEY, SF, Pacific 1674
Clinical Professor of Medicine, (Pediatrics), 44 Commonwealth, SF-sf

B. S., Pennsylvania Military College, 1890; M. D., Cooper Medical College, 1896; L. R. C. P., M. R. C. S., England, 1900. Senior Dresser, London Hospital, 1900; Resident Physician, St. Mark's Hospital, London, 1901-02; City Physician, in charge of Contagious Diseases, San Francisco, 1903-08; Assistant Professor of Pediatrics, Cooper Medical College, 1908, Associate Professor, 1909-12. At Stanford since 1912.

†PRICE, GEORGE CLINTON, PA 1053
Professor of Zoology, 5 Alvarado

B. S., De Pauw, 1890; Ph. D., Stanford, 1897. Student in Biology, Johns Hopkins University, 1890-92; University of Munich, 1895-96. At Stanford since 1892.

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*Deceased August 29, 1916.

†Reed, Alfred Cummings, SF, Fillmore 4276
Clinical Instructor in Medicine, 2429 Vallejo, SF-sf

A. B., Pomona, 1906; M. D., Bellevue Medical College, 1910. Instructor in Pharmacology, Bellevue Medical College, 1910-11; Assistant Surgeon, U. S. Public Health Service, 1911-13; Attending Physician, Yale Hospital, Changsha, China, 1913-15. At Stanford since 1916.

†Reining, Charles, PA 455R
Instructor in German, 340 Embarcadero-p

A. B., Stanford, 1908; A. M., Harvard, 1911; Ph D., Stanford, 1915. Student, Universities of Berlin, Munich, and Leipzig, 1908-10; Assistant Professor of German, Adelphi College, Brooklyn (N. Y.), 1911-13. At Stanford since 1915.

†Rendtorff, Karl Gustav, PA 449M
Associate Professor of German, 318 Lincoln-p

A. M., Stanford, 1894, Ph. D., 1896. Student, University of Giessen, 1884-85, University of Kiel, 1885-91. At Stanford since 1894.

†Rigdon, Rufus Lee, SF, Fillmore 2285
Clinical Professor of Surgery (Genito-Urinary),
1617 Broderick, SF-sf

M. D., Cooper Medical College, 1887. Assistant and Instructor in Genito-Urinary Clinic, Cooper Medical College, 1888-98, Associate Professor of Genito-Urinary Surgery and Chief of Genito-Urinary Clinic, 1898-1908, Professor of Genito-Urinary Surgery, 1908-12. At Stanford since 1912.

†Ritter, Arthur John, San Anselmo 8
Lecturer on Mental Deficiency, Ross-r

Graduate Teachers' College, Zürich, Switzerland, 1897. Research Assistant, Racial Studies, Johannesburg (South Africa), 1898-1901; Student, Paris, 1902-03; Instructor des enfants arrieres, Paris, 1904-05; Private Case Work with Feeble-minded Children, 1906-11; Principal Home School for Nervous and Backward Children, 1912. At Stanford since 1916.

†Rixford, Emmet, SF, Franklin 5100
Professor of Surgery, 1795 California, SF-sf

B. S., California, 1887; M. D., Cooper Medical College, 1891. Adjunct Professor of Surgery, Cooper Medical College, 1893-98, Professor 1898-1912; Visiting Surgeon, Lane Hospital, 1895, City and County Hospital, San Francisco, since 1899. At Stanford since 1909.

†Robinson, Edgar Eugene, PA 939J
Assistant Professor of American History, 1010 Bryant-p

A. B., Wisconsin, 1908, A. M., 1910. Assistant in History, University of Wisconsin, 1908-09, Fellow in American History, 1909-10; Assistant Professor of History, Carleton College, 1910-11; Instructor in History, University of Minnesota, Summer Session, 1912, Resident Lecturer, 1915-16; Assistant Professor of History, University of Michigan, Summer Session, 1916. At Stanford since 1911.

†Rogers, Austin Flint, PA 812J
Associate Professor of Mineralogy, 1047 Ramona-p

A. B., Kansas, 1899, A. M., 1900; Ph. D., Columbia, 1902. Assistant in Mineralogy, University of Kansas, 1898-1900; Assistant Geologist, University Geological Survey of Kansas, 1898-1900, 1903; Fellow in Mineralogy, Columbia University, 1900-02, Tutor in Mineralogy, 1902-05. At Stanford since 1905.

†Rogers, Frederick John, SJ 4589
Associate Professor of Physics, 550 S. 6th, San Jose

M. S., Cornell, 1891. Instructor in Physics, Cornell University, 1892-1900. At Stanford since 1900.

†**Ross, Perley Ason,**
Assistant Professor of Physics, 1830 Cowper
A. B., Stanford, 1908, A. M., 1910, Ph. D., 1911. At Stanford since 1908.

†**Rothganger, George,** SF, Kearny 2206
Assistant Clinical Professor of Surgery, 126 Stockton, SF-sf
A. B., California, 1885; M. D., Cooper Medical College, 1888. Medical Officer, United States Navy, 1889-1908. At Stanford since 1913.

[**Russell, Theresa Peet** (Mrs.),
Instructor in English, New York, N. Y.]
Ph. B., Iowa, 1895. Teacher in Denison Normal School, 1895-96; Principal, Vilisca High School, 1896-98; Graduate Student at Radcliffe College, 1898-99; Teacher in Anamosa High School, 1899-1900. At Stanford since 1905.

†**Ryan, Harris Joseph,** PA 1075
Professor of Electrical Engineering, 453 Webster
M. E., Cornell, 1887. With Western Engineering Co., Lincoln, Neb., 1887-88; Instructor in Physics, Cornell University, 1888-89, Assistant Professor of Electrical Engineering, 1889-92, Associate Professor, 1892-95, Professor, 1895-1905; Judge, Board of Awards, World's Fair, Chicago, 1893; U. S. Government Delegate, International Electrical Congress, St. Louis Exposition, 1904. At Stanford since 1905.

†**Sanford, Fernando,** PA 646
Professor of Physics, 450 Kingsley
B. S., Carthage College, 1879, M. S., 1882. Student, University of Berlin, 1886-88; Professor of Physical Science, Mt. Morris College, 1879-82; Superintendent of Schools, Ogle County, Ill., 1882-86; Instructor in Physics and Chemistry, Englewood (Ill.), High School, 1888-90; Professor of Physical Science, Lake Forest University, 1890-91. At Stanford since 1891.

†**Schaller, Walter Frank,** SF, Pacific 4495
Assistant Clinical Professor of Medicine (Neurology),
140 24th av., SF-sf
M. D., Cooper Medical College, 1902. Assistant in Pathology, Cooper Medical College, 1905-06; Assistant Surgeon, U. S. N., 1906-08. At Stanford since 1911.

†**Sears, Jesse Brundage,** PA 689M
Assistant Professor of Education, 1545 Waverley-p
A. B., Stanford, 1909. Student, University of Chicago, Summer Quarter, 1910; Research Scholar, Teachers' College, Columbia University, 1910-11; Instructor in Education, University of Wisconsin, 1909-10; Assistant in Educational Sociology, Teachers' College, Columbia University, Summer Session, 1911. At Stanford since 1911.

†**Sewall, Edward Cecil,** SF, Fillmore 4242
Clinical Professor of Surgery (Otology), 3515 Pacific, SF-sf
A. B., Stanford, 1898; M. D., Cooper Medical College, 1902. Assistant and Instructor in Ophthalmology, Cooper Medical College, 1901-07, Assistant Professor, 1907-09; Student in Freiburg, 1909-10; Associate Professor of Diseases of Eye, Ear, Nose and Throat, Cooper Medical College, 1910-12. At Stanford since 1912.

Seward, Samuel Swayze, Jr., PA 728X
Assistant Professor of English, 262 Kingsley-p
A. B., Columbia, 1896, A. M., 1897. Scholar in Literature, Columbia University, 1896-97; Assistant in Literature, 1897-99; Student, Oxford University, 1899-1900; Acting Professor of English, University of Nevada, 1907; Assistant Professor of English, University of California, Summer Session, 1907, University of Oregon, Summer Session, 1908. At Stanford since 1900.

SHOW, ARLEY BARTHLOW, PA 865
Professor of European History, 127 Cowper

A. B., Doane College, 1882; Graduate, Andover Theological Seminary, 1885; A. M., Doane, 1892. Pastor Congregational Church, Waco, Neb., 1885-87; Professor of History and English Literature, Doane College, 1887-92; Student, University of Leipzig, 1900-01; Lecturer on History of the Early Church, Pacific Theological Seminary, Berkeley, 1905-07. At Stanford since 1892.

†SLOAN, WILLIAM HENRY, PA 1454R2
Assistant Professor of Chemistry, Alta Mesa, Box 105-p

A. B., Stanford, 1903, A. M., 1904. Student, University of Leipzig, 1904-05; Assistant Chemist, San Francisco Board of Health, 1905-06. At Stanford 1903-04, and since 1906.

†SLONAKER, JAMES ROLLIN, PA 451
Assistant Professor of Physiology, 334 Kingsley-p

B. S., Wisconsin, 1893; Ph. D., Clark, 1896. Fellow in Biology, Clark University, 1893-96; with United States Fish Commission, Woods Holl (Mass.), Summer, 1895; Instructor in Zoology, Indiana University, 1896-99, Indiana University Biological Station, 1896-1900; Assistant Professor of Zoology, Indiana University, 1899-1901; Research Assistant in Neurology, University of Chicago, 1901-02, Associate in Neurology, 1902-03. At Stanford since 1903.

†SMITH, EVERETT WALLACE, PA 1156
Assistant Professor of English, 10 Alvarado

A. B., Stanford, 1899. At Stanford since 1910.

†SMITH, JAMES PERRIN, PA 600M
Professor of Paleontology, 1335 Cowper-p

A. B., Wofford College, 1884; A. M., Vanderbilt, 1886; Ph. D., Göttingen, 1892; LL. D., Wofford College, 1916. Assistant Geologist and Chemist, Arkansas Geological Survey, 1887-90; Assistant Geologist, U. S. Geological Survey, 1895-1906, Geologist since 1906. At Stanford since 1892.

†SMITH, STANLEY ASTREDO, PA 972W
Assistant Professor of French, 417 Channing

A. B., Stanford, 1903, A. M., 1905. Assistant in Romanic Languages, Leland Stanford Junior University, 1903-04, Instructor, 1904-07; Student, Universities of Paris and Madrid, 1906-07; Instructor in French and Italian, University of Washington, 1907-11; Student, Harvard University, 1911-13, Instructor in Romance Languages, 1912-13; Professor of Romance Languages, Reed College, 1913-14. At Stanford 1903-07 and since 1914.

SNELL, ELIZABETH BURRITT (Mrs.),
Appointment Secretary, 202 Bryant-p

A. B., Stanford, 1908.

[†SNOW, WILLIAM FREEMAN,
Clinical Professor of Hygiene and Public Health,
New York, N. Y.]

A. B., Stanford, 1896, A. M., 1897; M. D., Cooper Medical College, 1900. Student, Johns Hopkins Medical School, 1901-02; Secretary California State Board of Health, 1909-13. At Stanford since 1901.

†SNYDER, JOHN OTTERBEIN, PA 600R
Associate Professor of Zoology, 1345 Cowper

A. B., Stanford, 1897, A. M., 1899. Assistant U. S. Fish Commission, 1897, 1899, 1904, 1915, 1916; Naturalist on U. S. S. Albatross engaged in deep sea investigations, 1902, 1906; Expert Ichthyologist, U. S. National Museum, 1914. At Stanford since 1897.

†SOMERS, GEORGE BURBANK, SF, Fillmore 296
Clinical Professor of Gynecology, 2662 Vallejo, SF-sf

A. B., Harvard, 1886; M. D., Cooper Medical College, 1888. Chief Surgeon, San Francisco Emergency Hospital, 1891-95; Adjunct to Chair of Gynecology, Cooper Medical College, 1889; Professor of Gynecology, 1901; Gynecologist to Lane Hospital, 1900-12. At Stanford since 1911.

†SPALDING, ALFRED BAKER, SF, Fillmore 826
Professor of Obstetrics and Gynecology, 2651 Green, SF-sf

A. B., Stanford, 1896; M. D., Columbia, 1900. House Surgeon, General Memorial Hospital, New York, 1900-01; Assistant Resident Physician, Sloane Maternity Hospital, New York, 1901-02; Instructor in Obstetrics, University of California, 1902-05, Assistant Professor, 1905-09, Professor, 1909-12. At Stanford since 1912.

STANIFORD, WARREN PAUL, PA 1007
Student Adviser, 10 Lasuen

A. B., Stanford, 1916.

†STANLEY, EDWARD JOHN, PA 544W
Instructor in Pattern Making, 269 Hawthorne-p

Machinist with Pacific Iron Works, San Francisco, 1879, Blacksmith, 1880, Draughtsman, 1881, Pattern Maker, 1883-86; Third Assistant Engineer, Steamer Alabama, 1882; Foreman Pattern Maker, Union Iron Works, San Francisco, 1886-1901, 1906. At Stanford since 1901.

STARKS, CHLOE LESLEY (Mrs.), PA 812M
Instructor in Graphic Art, 1115 Ramona-p

At Stanford since 1899.

†STARKS, EDWIN CHAPIN, PA 812M
Assistant Professor of Zoology, 1115 Ramona-p

Assistant in United States Bureau of Biological Survey, 1897-99; Curator of the Museum and Assistant Professor of Zoology, University of Washington, 1899-1900. At Stanford since 1900.

†STEBBINS, HORATIO WARD, PA 652M
Instructor in Mechanical Engineering, 281 Addison-p

A. B., California, 1899; B. S., Massachusetts Institute of Technology, 1902. Assistant to Engineer of Tests, Southern Pacific Railroad Company, 1902-05; Engineer and Estimator, San Francisco Bridge Company, 1905-13. At Stanford since 1914.

†STEPHENSON, HENRY AUGUSTUS, SF, Fillmore 4001
Assistant Professor of Obstetrics and Gynecology,
2299 Sacramento, SF-sf

A. B., Randolph-Macon College, 1906; M. D., Johns Hopkins Medical School, 1910. Assistant Resident Obstetrician, Johns Hopkins Hospital, 1911-12, Resident Obstetrician, 1912-14; Assistant in Obstetrics, Johns Hopkins Medical School, 1911-12, Instructor, 1912-14. At Stanford since 1914.

†STILLMAN, JOHN MAXSON, PA 1048
Vice-President, and Professor of Chemistry, 2 Alvarado

Ph. B., California, 1874, Ph. D., 1885, LL. D., 1916. Assistant in Chemistry, University of California, 1873-75; Student in Chemistry, Strassburg and Würzburg, 1875-76; Instructor in Organic and General Chemistry, University of California, 1876-82; Chemist of the Boston Sugar Refining Company and Superintendent and Chemist of the American Sugar Refining Company, Boston, 1882-91. At Stanford since 1891.

†STILLMAN, STANLEY, SF, West 1034
Professor of Surgery, 2336 Broadway, SF-sf

M. D., Cooper Medical College, 1889. Adjunct Professor of Surgery, Cooper Medical College, 1895-98, Professor of Surgery, 1898-1912; Assistant Visiting Surgeon, City and County Hospital, San Francisco, 1891-99, Visiting Surgeon, 1899-1912; Visiting Surgeon, Lane Hospital, 1895-1912. At Stanford since 1909.

STOLTENBERG, CLARA S., PA 1024
Associate Professor of Physiology, 7 Alvarado

A. B., Stanford, 1896, A. M., 1897. At Stanford since 1896.

†STOLZ, HERBERT ROWELL, PA 260R
Director of Physical Training and 355 Kellogg
Medical Adviser of Men Students,

A. B., Stanford, 1911, M. D., 1914. Rhodes Scholar at Oxford, 1910-13. At Stanford since 1914.

†STUART, HENRY WALDGRAVE, PA 1069
Professor of Philosophy, 8 Alvarado

Ph. B., California, 1893; Ph. D., Chicago, 1900. Teacher, Hollister (Cal.) H. S., 1893-94; Fellow in Political Economy, University of Chicago, 1894-96; Instructor (pro tem.) in Economics and Psychology, Washington University, St. Louis, 1896-97; Teacher, Central School, Oakland (Cal.), 1897-98; Principal Woodland (Cal.) H. S., 1898-99; Fellow in Philosophy, University of Chicago, 1899-1900; Instructor in Economics and History, Ripon College, 1900-01; Instructor in Philosophy, State University of Iowa, 1901-04; Acting Professor of Philosophy, Lake Forest College, 1904-05, Assistant Professor, 1905-07. At Stanford since 1907.

SUTLIFF, HELEN BINNINGER, PA 876
Chief Cataloguer, Library, 19 Salvatierra

A. B., Kansas, 1890. Head Cataloguer, University of Kansas Library, 1891-1905; Cataloguer in Columbia University Library, Summer, 1901. At Stanford since 1906.

†SWAIN, ROBERT ECKLES, PA 247
Professor of Chemistry, 638 Channing-p

A. B., Stanford, 1899; M. S., Yale, 1901, Ph. D., 1904. Student, Universities of Strassburg and Heidelberg, 1901-02, Yale University, 1909-10. At Stanford since 1898.

†TATLOCK, JOHN S. P., PA 1061M
Professor of English Philology, 5 Santa Ynez

A. B., Harvard, 1896, A. M., 1897, Ph. D., 1903. Student, Universities of Michigan, 1899-1901, Freiburg im Breisgau, 1904; Instructor in English, University of Michigan, 1897-1901, 1903-05, Assistant Professor, 1905-07, Junior Professor, 1907-12, Professor, 1912-15; Professor of English, University of Chicago, Summer Quarter, 1909, Dartmouth College, Summer Session, 1914. At Stanford since 1915.

†TERMAN, LEWIS MADISON, PA 1178
Professor of Education, 9 Dolores

A. B., Indiana, 1902, A. M., 1903; Ph. D., Clark University, 1905. Fellow in Psychology and Education, Clark University, 1903-05; Principal of High School, San Bernardino (Cal.), 1905-06; Head of Department of Child Study and Pedagogy, Los Angeles State Normal School, 1906-10; Instructor in Education, Indiana University, Summer Session, 1909, New York University, Summer Session, 1916. At Stanford since 1910.

[1]†TERRY, MARCUS CLAUDE, PA 395M
Clinical Instructor in Immunology, 536 Middlefield-p

M. D., Rush Medical College, 1899. At Stanford since 1913.

†TOLMAN, CYRUS FISHER, JR., PA 1052R
Associate Professor of Economic Geology, 6 Alvarado

B. S., Chicago, 1896. Fellow in Geology, University of Chicago, 1897-98; Consulting Economic Geologist since 1898; Professor of Geology, University of Arizona, 1905-06; Professor of Geology and Mining, 1906-12; Territorial Geologist of Arizona, 1910-12. At Stanford since 1912.

†TOWNLEY, SIDNEY DEAN, PA 1016
Associate Professor of Applied Mathematics, 33 Salvatierra

B. S., Wisconsin, 1890, M. S., 1892; D. Sc., Michigan, 1897. Fellow in Astronomy, University of Wisconsin, 1890-91, Assistant in Astronomy and Mathematics, 1891-92; Hearst Fellow in Astronomy, University of California (Lick Observatory), 1892-93; Instructor in Astronomy, University of Michigan, 1893-

95, 1896-98; Student, Universities of Berlin and Munich, 1895-96; Instructor in Practical Astronomy, University of California, 1898-1903; Lecturer in Astronomy, 1904-07; Astronomer in charge of International Latitude Observatory, 1903-07. At Stanford since 1907.

†Treat, Payson Jackson, PA 538R
Professor of History, 27 Salvatierra

A. B., Wesleyan, 1900; A. M., Columbia, 1903; Ph. D., Stanford, 1910. Instructor in History, Barnard School, New York City, 1900-03; Graduate Student, Leland Stanford Junior University, 1903-05; Research Student in Far East, 1906-07; Instructor in Government, Harvard University, 1908-09; Lecturer in Political Science, University of California, second semester, 1915-16. At Stanford since 1905.

True, Helen Ella, PA 538R
Secretary to the President, 682 University-p

A. B., Mt. Holyoke, 1905. At Stanford since 1914.

†Vernier, Chester Garfield, PA 254
Professor of Law, 951 Bryant-p

A. B., Butler College, 1903; J. D., Chicago, 1907. Graduate Scholar, University of Chicago, 1904-05; Instructor in Law, Indiana University, 1907-08; Professor of Law, University of Nebraska, 1908-09, Indiana University, 1909-11, University of Illinois, 1911-16; Lecturer in Law, University of Chicago, Summer Quarters, 1911, 1912, University of Michigan, Summer Session, 1914. At Stanford since 1916.

deVries, Louis Peter, PA 533J
Instructor in Romanic Languages, 603 Waverley

A. M., Wisconsin, 1911, Ph. D., 1913. Student, University of Leyden, 1909; Assistant and Teaching Fellow in Romance Languages, University of Wisconsin, 1910-12. At Stanford since 1913.

†West, Victor J., PA 291J
Assistant Professor of Political Science, 376 Addison-p

Ph. B., Chicago, 1905. Instructor in English and Civics, Bradley Polytechnic Institute, 1905-06; Fellow in Political Science, University of Chicago, 1908-10, Assistant in Political Science, 1910; Instructor in Politics, Northwestern University, 1910-13; Assistant Chief of Service, Illinois Progressive Service Board, 1913; Instructor in Political Science, University of California, Summer Session, 1915. At Stanford since 1913.

†Weymouth, Frank Walter,
Assistant Professor of Physiology, 11 Alvarado

A. B., Stanford, 1909, A. M., 1911. Assistant in Physiology, Johns Hopkins University, 1912-13. At Stanford since 1910.

†Whitaker, Albert Conser, PA 1042J
Professor of Economics, 26 Alvarado

A. B., Stanford, 1899; Ph. D., Columbia, 1904. Scholar in Economics, Columbia University, 1899-1900, Fellow, 1900-01; Student, University of Berlin, 1901; Lecturer in Economics and Social Science, Columbia University, 1906-07; Lecturer in Economics, University of California, Summer Session, 1906, 1911; Acting Professor of Economics, University of Chicago, second half of 1911-12 and 1912-13. At Stanford since 1902.

†Whittier, Clarke Butler, PA 1443, R1
Professor of Law, Menlo Heights

A. B., Stanford, 1893; LL. B., Harvard, 1896. Attorney at Law, Los Angeles, 1895-96; Student, Leland Stanford Junior University, 1896-97, Instructor in Law, 1897-99, Assistant Professor, 1899-1900, Associate Professor, 1900-02; Professor of Law, University of Chicago, 1902-14. At Stanford 1897-1902, and since 1915.

†Wilbur, Ray Lyman, PA 46
President of the University, 1201 Bryant

A. B., Stanford, 1896, A. M., 1897; M. D., Cooper Medical College, 1899. Assistant in Physiology, Leland Stanford Junior University, 1894-96, Instructor, 1896-97, Assistant Professor, 1900-03; Lecturer and Demonstrator in Physiology, Cooper Medical College, 1899-1900, Professor of Medicine and Dean of the Medical School, 1909-16. At Stanford 1894-97, 1900-03, and since 1909.

†Wildman, Murray Shipley, PA 1179
Professor of Economics, 37 Salvatierra

A. B., Earlham, 1893; Ph. D., Chicago, 1904. Professor of History and Economics, Central College (Mo.), 1904-05; Instructor in Economics, University of Missouri, 1905-06, Assistant Professor, 1906-08; Acting Assistant Professor, University of Chicago, Summer Quarter, 1909; Assistant Professor of Economics and Commerce, Northwestern University, 1909-11, Professor, 1911-12. At Stanford since 1912.

Williams, Francis Thomas, SF, Fillmore 2262
Instructor in Surgery (Genito-Urinary), 2101A Webster, SF-sf

A. B., Johns Hopkins, 1908, M. D., 1912. House Officer, St. Agnes Hospital, Baltimore, 1912-13; Assistant, Genito-Urinary Clinic, Johns Hopkins Hospital, 1913-14; Special Worker, Hygiene Laboratory, United States Public Health Service, Washington, D. C., 1914; Assistant Resident Surgeon, James Buchanan Brady Urological Institute of the Johns Hopkins Hospital, 1914-15. At Stanford since 1915.

†Willis, Bailey, PA 1118
Professor of Geology, 5 Lasuen

E. M., Columbia School of Mines, 1878, C. E., 1879; Hon. Ph. D., University of Berlin, 1910. Special Expert, Iron Ores, Tenth Census, 1879-81; Geologist, Northern Transcontinental Survey, exploration for Northern Pacific and Allied Companies, 1881-84; Geologist, United States Geological Survey, in charge Appalachian Division, New York to Alabama, Cascade Range and Puget Sound Division, Washington, and Editor Geologic Atlas of the United States, 1884-1915; Assistant to Director, United States Geological Survey, 1897-1902; Geologist in charge of Division of Areal and Stratigraphic Geology, 1900-06; Geologist engaged in Geological explorations in China under auspices of Carnegie Institution, 1903-04; Lecturer on Geology, Johns Hopkins University, 1895-1902, University of Chicago, 1909; Consulting Geologist to Minister of Public Works, Argentina, 1911-14. At Stanford since 1915.

†Wing, Charles Benjamin, PA 947W
Professor of Structural Engineering, 345 Lincoln

C. E., Cornell, 1886. Fellow in Civil Engineering, Cornell University, 1886-87, Instructor, 1887-90, Assistant Professor, 1890-91; Engineer, Pompton (N. J.) Powder Co., 1887, Phoenix Powder Co., Farmingdale, N. Y., 1888; Assistant Engineer, Berlin (Conn.) Iron Bridge Co., 1889-90; Professor of Bridge and Hydraulic Engineering, University of Wisconsin, 1891-92. At Stanford since 1892.

[1]†Wintermute, George Preston, Berkeley 5933
Clinical Instructor in Surgery (Otology), 227 Tunnel road, Berkeley-b

M. D., Jefferson Medical College, 1893. At Stanford since 1912.

Wolfsohn, Julian Mast, SF, Fillmore 1526
Assistant Clinical Professor of Medicine (Neurology),
2238 Divisadero, SF-sf

A. B., University of California, 1905, M. S., 1907; M. D., Johns Hopkins University Medical School, 1911. Research Assistant, Herzstein Laboratory, University of California, 1906-07; Medical House Officer, Johns Hopkins Hospital, 1911-12. At Stanford since 1913.

†Yerington, Henry Herbert, SF, Pacific 5464
Assistant Professor of Medicine (Pediatrics), 78 25th av., SF-sf

M. D., Columbia University, 1908. Student, Stanford University, 1900-04, Bellevue Hospital, New York, 1909-10; House Physician, Pediatric Service, Bellevue Hospital, 1909-10. Instructor in Pediatrics, Cooper Medical College, 1910-11; Visiting Pediatrician, San Francisco Hospital, Assistant Visiting Staff, Children's Hospital, San Francisco. At Stanford since 1913.

Young, Hayes Wilson, PA 1013
Assistant Professor of Metallurgy, 109 Encina

A. B., Stanford, 1911, Engineer, 1912. At Stanford since 1911.

Young, Stewart Woodford, PA 390L
Professor of Physical Chemistry, Menlo Heights

B. S., Cornell, 1890. Assistant in Chemistry, Cornell University, 1890-91; Instructor in Chemistry, Swarthmore College, 1891-93. At Stanford since 1893.

ASSISTANTS IN INSTRUCTION

†Adams, William Louis, Pediatrics, 2101 Webster, SF-sf
M. D., Tulane Medical School, 1890.

Adler, Howard Felix, Surgery (Genito-Urinary), 1590 Broadway, SF-sf
B. S., California, 1904; M. D., Harvard, 1908. German Hospital, New York City, 1908-11.

Bailey, Margery, English 530 Warren, Redwood-r
A. B., Stanford, 1914, A. M., 1916.

[2]Bennett, Edwin Oliver, Mechanical Engineering 309 Encina
A. B., Stanford, 1917.

deBernardi, Alice, Romanic Languages, Madroño
A. B., Stanford, 1916.

[1]Bevier, George, Jr., Chemistry, 139 Encina
A. B., Stanford, 1912.

Brady, Emmet James, Obstetrics and Gynecology, 1858 Green, SF-sf
A. B., Stanford, 1911, M. D., 1914. Senior Interne, Lane Hospital, 1914-15.

Brekke, Mabel Adella, Greek, 31 Villa av., SJ-sj
A. B., Stanford, 1913, A. M., 1914.

Brown, Joseph Richard, Obstetrics and Gynecology, 930 Pierce, SF-sf
A. B., Santa Clara, 1907; M. D., Georgetown University, 1911. Assistant Demonstrator in Anatomy, Georgetown University, 1911.

†Burrows, John Robert, Surgery, 2007 Buchanan, SF-sf
M. D., Cooper Medical College, 1906. Assistant in Ophthalmology, Cooper Medical College, 1909.

†Butler, Edmund, Gynecology, 798 Post, SF-sf
M. D., Cooper Medical College, 1911. Resident Surgeon and Senior Interne in Surgery, Lane Hospital, 1912-14; Surgeon Municipal Emergency Hospital, since 1914; Associate Member of Staff of St. Luke's Hospital, since 1914.

[1]†Christal, Charles Henry, Medicine, 1271 Pine, SF-sf
L. R. C. P., L. R. C. S., L. M., Dublin, 1908. Resident Medical Officer, Hammersmith Infirmary, London, 1908-09; Resident Surgical Officer, The Hospital, Weston-super-Mare, England, 1909-10; Senior House Surgeon, Bolingbroke Hospital, London, 1911-12.

Clark, Laura Cornelia, Mathematics, 64 Roble
A. B., Stanford, 1915, A. M., 1916.

Cosgrave, Millicent Mary, Medicine (Neurology), 2619 Octavia, SF-sf
M. D., Cooper Medical College, 1902. Assistant, Children's Clinic, Cooper Medical College, 1904-08; Assistant, Medical Clinic, San Francisco Polyclinic, 1904-13; Chief, Gynecological Clinic, San Francisco Fruit and Flower Mission, 1906-13.

Cowgill, George Raymond, Physiology, 410 Lytton-p
A. B., Stanford, 1916.

†Dillon, James Root, Jr., Surgery (Genito-Urinary), 516 Sutter, SF-sf
A. B., Stanford, 1908; M. D., Cooper Medical College, 1912.

†Elsey, Howard McKee, Chemistry, 734 Middlefield-p
A. B., Stanford, 1914.

†Ferris, Gordon Floyd, Entomology, 467 Melville
A. B., Stanford, 1916.

†Gage, Edmund Vernon, Romanic Languages, 230 Kellogg-p
A. B., Harvard, 1899; A. M., Pennsylvania State College, 1908.

Gardner, Laurence Dickinson, Chemistry, 122 Encina

Gates, Amelia L., Medicine (Pediatrics), 860 Hyde, SF-sf
M. D., Cooper Medical College, 1894. Student, Johns Hopkins University, 1895, Vienna, 1906-08.

Haas, Sylvan Lewis, Surgery (Genito-Urinary), 1120 Union, SF-sf
B. S., University of California, 1904; M. D., Johns Hopkins Medical School, 1908.

†Harbaugh, Ross Wallace, Surgery, 674 10th av., SF-sf
A. B., Stanford, 1909, M. D., 1913. Interne, City and County Hospital, San Francisco, 1913-14; Resident Physician, St. Mary's Hospital, San Francisco, 1914-15; Stanford Assistant in Surgery, San Francisco Hospital, since 1915.

Hodges, George Charles, History, 451 Channing
A. B., Stanford, 1916.

[†Huffaker, Anthony, Medicine (Neurology), 1739 Pine, SF-sf]
M. D., Cooper Medical College, 1890.

†Hyde, Clarence Elmer, Surgery, 2700 Green, SF-sf
A. B., Stanford, 1905; M. D., Columbia, 1907.

Jones, Philip Hanby, Chemistry, 430 Forest-p

Kerr, Ruby Meta, History, Route B, Box 382, SJ-sj
A. B., Stanford, 1916, A. M., 1917.

Kimberlin, Lester O., Surgery (Clinic), 616 Baker, SF-sf
M. D., Cooper Medical College, 1911. Interne, Lane Hospital, 1912, Senior Interne, Obstetrics and Gynecology, 1912-13.

†Kirk, Josiah H., Surgery (Ear, Nose, Throat), 627 University-p

Kraemer, Mary Webster (Mrs.), Latin, 1037 Ramona-p

†Kroll, Frederick Walter, Obstetrics and Gynecology, 1242 Washington, SF-sf
M. D., Cooper Medical College, 1912.

[1]Larson, Carl Frederick, Surgery (Clinic), 3004 16th, SF-sf

[Leach, Charles Nelson, Medicine (Dermatology) In Europe]
A. B., Stanford, 1909, M. D., 1913.

Leib, Karl Elias, English, Encina
A. B., Stanford, 1916.

Loel, Wayne Frederick, Geology and Mining, 102 Encina
A. B., Stanford, 1916.

[2]Luke, Ittai Albert, Physics, 25 Salvatierra

Lummis, Katharine, Latin, 7 Salvatierra
A. B., Lawrence, 1890; A. B., Stanford, 1907, A. M., 1911. Instructor in Latin, Eastern High School, Baltimore (Md.), 1908-10; Student, American School of Classical Studies, Rome, Italy, 1910-11; Instructor in Latin, College of the Pacific, 1912-14; University Fellow in Latin, Johns Hopkins University, 1915-16.

MacArthur, Charles George, Pharmacology, 1525 Scenic av., Berkeley-b
A. B., Oberlin, 1908; A. M., Chicago, 1908.

McCabe, Edward Everett, Physics, 636 Waverley-p
A. B., Stanford, 1915.

†McClelland, James H., Surgery (Ear, Nose, Throat), 255 15th av., SF sf

Mehrtens, Henry George, Medicine (Neurology), 2407 Pacific ave., SF-sf
B. S., California, 1911; M. D., Stanford, 1913.

†Montgomery, William O., Surgery (Ear, Nose, Throat), 259 16th ave., SF-sf
M. D., Cooper Medical College, 1907. Emergency Surgeon, 1908-09.

†Moore, H. Staats, Surgery (Ear, Nose, Throat), 209 Post, SF-sf
M. D., Medical College of Indiana, Purdue University, 1898. Assistant, Indianapolis City Clinic; Assistant Surgeon, U. S. A., 1898-1901; Assistant, Ear, Nose, and Throat Clinic, Cooper Medical College, 1910.

[2]Niebel, Herbert Lee, Bacteriology, 1106 Bryant-p
A. B., Stanford, 1914.

Oberlé, Eugene Jean, Romanic Languages, 611 Bryant
A. B., Stanford, 1915, A. M., 1916.

Otis, Arthur Sinton, Education, 25 Salvatierra
A. B., Stanford, 1910, A. M., 1915.

[2]Parker, William Leonard, Civil Engineering, 1028 Emerson-p

Pierson, Philip Hale, Medicine, 81 7th ave., SF-sf
A. B., Yale, 1908; M. D., Harvard, 1913. House Officer, Massachusetts General Hospital, 1914-15.

Pratt, Dudley James, Botany, 911 Scott-p
A. B., Washburn, 1913, A. M., 1916.

†Proctor, William Martin, Education, Los Altos-l
A. B., Whitman, 1901, A. M., 1906; A. M., Stanford, 1916.

Putnam, Dorothy, History, 12 Roble
A. B., Stanford, 1916.

Rakestraw, Norris Watson, Chemistry, 51 Encina
A. B., Stanford, 1916.

Read, Jay Marion, Medicine,
B. S., California, 1912, M. S., 1913; M. D., Stanford, 1915.

Rich, Willis Horton, Physiology, University Park
B. S., Lombard, 1905; A. B., Stanford, 1909.

†Rumwell, Melville E., Surgery, 719 Ashbury, SF-sf
M. D., Cooper Medical College, 1895.

Sellards, John Armstrong, Romanic Languages, 25 Salvatierra
A. B., Illinois, 1912; A. M., Stanford, 1916.

†Sewall, Chester Durbin, Medicine, 2201 Webster, SF-sf
M. D., Cooper Medical College, 1906.

†Smith, Elmer William, Pathology, 1334 Van Ness, SF-sf
A. B., Stanford, 1912, M. D., 1915.

Templeton, John Wesley, Chemistry, 36 Encina

[1]Templeton, Ruric Ruskin, Encina Gymnasium, 515 Lytton-p

Trace, Gertrude May, Psychology, 730 University, SJ-sj
A. B., Stanford, 1914.

Tupper, Roland Beatty, Medicine, 177 Post, SF-sf
M. D., Cooper Medical College, 1910. Assistant Visiting Physician, St. Luke's Hospital, 1912; Assistant in Pediatrics, Cooper Medical College, 1912; Assistant Visiting Surgeon, San Francisco Hospital, since 1912; On Diagnostic Section, St. Luke's Hospital Clinical Club, since 1915.

Ulrey, Dayton L., Physics, Ravenswood
A. B., Indiana, 1911; A. M., 1912.

Weeks, Pearl May, Physics, 1013 Ramona
A. B., Stanford, 1916.

Wenzel, Robert Nicolas, Chemistry, 51 Encina
A. B., Stanford, 1916.

†Whelan, Paul, Cutaneous Medicine, 2196 3d, SF-sf
M. D., Pennsylvania, 1915. Interne, Southern Pacific Hospital, San Francisco, 1915-16.

Williams, Fleta Hazel, Chemistry, 324 Emerson-p

Wolverton, Sarah Foss, English, 263 Churchill-p
A. B., Colorado, 1904, A. M., 1905; A. M., Radcliffe, 1910. Teacher of English, Weaubleau College (Mo.), 1906-07; Teacher of English and Psychology, Paonia (Colo.) High School, 1907-09; Fellow in English, Radcliffe College, 1909-10; Teacher of English, Cambridge and Winthrop (Mass.) High Schools, 1910-11, Tucson (Ariz.) High School, 1911-12; Preceptress and Teacher of English, Colorado State Teachers' College, 1912-13; Teacher of English and Expression, Castilleja School, 1913-14.

†Woolsey, Chester Howard, Surgery (Genito-Urinary),
2220 Sacramento, SF-sf
B. S., California, 1895; M. D., 1901. Assistant to Chair of Clinical Medicine, University of California, 1902-06; State Bacteriologist, California, 1903-04; Assistant to Chair of Genito-Urinary Surgery, Cooper Medical College, 1911-12.

†Wrinkle, George Scott, Surgery (Otology), 3272 Mission, SF-sf

Yoder, Olive Lillian, History, 32 Lasuen
A. B., Stanford, 1916.

Zvenigrad, Abraham, History, 341 Columbia, Mayfield-m
A. B., Stanford, 1916.

LIBRARY STAFF

†Clark, George Thomas, Librarian.
Park, Charles V., Assistant Librarian.
Brooks, Lucia May, Chief of Serial Department.
Hadden, Elizabeth, Chief of Order Department.
Hays, Alice Newman, Reference Librarian.
Keller, Lena Marguerite, Reviser, Catalogue Department.
Ophüls, Louise, Medical Librarian, Lane Medical Library.
Sutliff, Helen Binninger, Chief Cataloguer.

Almond, Nina, Cataloguer, 3 Lasuen
Brinton, Margaret, Cataloguer, Lane Medical Library, 2211 California, SF-sf
Crutcher, Ruth, Typist, 8 Lasuen
Cruttenden, Elsie B., Cataloguer, 20 Lasuen
Davis, Margaret, Assistant, Lane Medical Library, 1721 Pacific, SF-sf
Dunlap, David Porter, Loan Desk, 117 Encina
A. B., Stanford, 1916.
Fisher, Hazel Margreta, Loan Desk, 50 Roble
A. B., Stanford, 1916.
Flügel, Hildegarde, Cataloguer, 1153 Cowper-p
Gale, Helen Avery, Reference Department, 940 Waverley-p
Heald, Ethel Grace, Serial Department, 554 Hawthorne-p
Katz, Louise W., Cataloguer, 3 Lasuen
[1]Keatinge, Anne Harriett, Cataloguer, Lane Medical Library, 2321 Sacramento, SF-sf
Odenheimer, Frances June, Cataloguer, 531 Lytton-p
Smith, Mildred, Order Department, 1221 Webster-p
Stillman, Minna, Cataloguer, 2 Alvarado
A. B., Stanford, 1903.
[2]Sweeney, Luella, Assistant, Lane Medical Library, 2321 Sacramento, SF-sf
Todd, Hannah Lillian, Bindery, 557 Hamilton-p
[1]Wilke, Elizabeth, Secretary, Atrastradero rd. near County rd.

ASSISTANTS IN ADMINISTRATION

PRESIDENT'S OFFICE

Boulware, Edna, Stenographer, Appointment Secretary's Office, 170 Bryant-p
Hadden, Fannie, Secretary, Committee on Public Health, 531 Cowper-p
Jones, Edith Maud, Stenographer, President's Office, 412 Everett-p

Murray, Margaret, Assistant to Academic Secretary,	521 Addison-p
Ramsey, Agnes C. (Mrs.), Mimeographer,	20 Lasuen
Tag, Tessie, Secretary, Publicity, A. B., Stanford, 1915.	85 Roble
Thomas, Thomas Andrew, Mimeographer,	1048 Webster-p

REGISTRAR'S OFFICE

Ellias, Laura Lillian, Assistant to Alumni Secretary, A. B., Stanford, 1915, A. M., 1916.	635 Homer
Howe, Mollie Margaret, Assistant to Registrar, A. B., Stanford, 1914, A. M., 1915.	375 Everett-p

TECHNICAL ASSISTANTS

†Banham, Frank Daniel, Foreman, Mechanician Shop,	826 Waverley-p
Bell, May Knight (Mrs.), Entomology,	532 Homer-p
Bruce, William Johnson, Chemistry, Redwood City,	Box 381 PA-p
Conover, John S., Custodian, Mechanical Engineering,	323 High-p
Ferris, Roxana Stinchfield (Mrs.), Botany,	467 Melville
†Havens, Myrtil Cole, Mechanician, Machine Shop,	727 Cowper-p
Holt, Inezetta, Roble Gymnasium, A. B., Stanford, 1914.	531 Lytton-p
Huskey, Anne F. (Mrs.), Stenographer, Civil Engineering,	555 Lytton
Johanson, Greta, Roble Gymnasium,	329 Hawthorne-p
Johannsen, Gustav, Encina Gymnasium,	Encina Gymnasium
[1]Kusama, Yoshio, Bacteriology, A. B., Stanford, 1916.	403 Kingsley-p
McKendry, Marion, Stenographer, Law,	1035 Bryant-p
Ober, Florence Sophia, Stenographer, Chemistry,	Los Altos-l
Oldroyd, Ida Carter (Mrs.), Curator, Geology and Mining,	College Terrace
Risling, Ernest, Anatomy,	935 Webster-p
Schnell, Delis, Stenographer, Mechanical Engineering,	Mayfield-m
Scott, Thomas Benjamin, Storekeeper, Chemistry,	Mayfield-m
†Stillson, Frank Leonard, Custodian, Encina Gymnasium,	451 Ruthven-p
Sturrock, Mary H., Stenographer, History,	715 1st ave., San Mateo-sm
†Uhlman, Walter, Engineer, Mechanical Engineering,	230 Emerson-p

ORGANIZATION

FOUNDATION

THE Leland Stanford Junior University was established under an Act of the Legislature, approved March 9, 1885, entitled "An Act to advance learning, the arts and sciences, and to promote the public welfare by providing for the conveyance, holding, and protection of property, and the creation of trusts for the founding, endowment, erection, and maintenance within this State of universities, colleges, schools, seminaries of learning, mechanical institutes, museums, and galleries of art." The Founding Grant, executed November 11, 1885, was made public at a meeting of the Board of Trustees, held in San Francisco, November 14, 1885. The cornerstone of the inner quadrangle was laid May 14, 1887, and the institution opened to students October 1, 1891.

NATURE, OBJECT, AND PURPOSES OF THE UNIVERSITY

'We, Leland Stanford and Jane Lathrop Stanford, husband and wife, grantors, desiring to promote the public welfare by founding, endowing, and having maintained upon our estate known as the Palo Alto Farm, and situated in the Counties of San Mateo and Santa Clara, State of California, United States of America, a university for both sexes, with the colleges, schools, seminaries of learning, mechanical institutes, museums, galleries of art, and all other things necessary and appropriate to a university of high degree, to that end, and for that purpose, do hereby grant,' etc.

'And that the trust hereby created may be executed according to the wishes of the grantors and each of them, they do hereby designate the Nature, Object, and Purposes of the Institution hereby founded, to be:

'Its nature, that of a University, with such seminaries of learning as shall make it of the highest grade, including mechanical institutes, museums, galleries of art, laboratories, and conservatories, together with all things necessary for the study of agriculture in all its branches, and for mechanical training, and the studies and exercises directed to the cultivation and enlargement of the mind;

'Its object, to qualify students for personal success and direct usefulness in life;

'And its purpose, to promote the public welfare by exercising an influence in behalf of humanity and civilization, teaching the blessings of liberty regulated by law, and inculcating love and reverence for the great principles of government as derived from the inalienable rights of man to life, liberty, and the pursuit of happiness.'

NAME OF THE UNIVERSITY

'Since the idea of establishing an institution of this kind for the benefit of mankind, came directly and largely from our son and only child, Leland, and in the belief that had he been spared to advise as to the disposition of our estate, he would have desired the devotion of a large portion thereof to this purpose, we will that for all time to come the institution hereby founded shall bear his name, and shall be known as The Leland Stanford Junior University.'

MANAGEMENT AND CONTROL OF THE UNIVERSITY

The general management and control of the institution is vested in a Board of Trustees originally numbering twenty-four, and chosen for life. By the Amending Act of May 31, 1899, the number of trustees is reduced to fifteen, with future elections for a term of ten years. The Board of Trustees fills all vacancies.

POWERS AND DUTIES OF THE TRUSTEES

'The Trustees shall have power and it shall be their duty:

'To appoint a President of the University, who shall not be one of their number, and to remove him at will.

'To fix the salaries of the President, Professors, and Teachers, and to fix them at such rates as will secure to the University the services of men of the very highest attainments.

'To establish and maintain at such University an educational system which will, if followed, fit the graduate for some useful pursuit, and to this end to cause the pupils, as early as may be, to declare the particular calling which in life they may desire to pursue. . . .

'To prohibit sectarian instruction, but to have taught in the University the immortality of the soul, the existence of an all-wise and benevolent Creator, and that obedience to His laws is the highest duty of man.

'To have taught in the University the right and advantages of association and coöperation.

'To afford equal facilities and give equal advantages in the University to both sexes.

'To maintain on the Palo Alto estate a farm for instruction in agriculture in all its branches.

'The Board of Trustees shall annually report all their proceedings to the person who for the time being shall fill the office of Governor of the State of California, and shall accompany such report with a full account of their financial operations for the preceding year, and with a statement of the financial affairs of the institution.'

Powers and Duties of the President

'It shall be the duty of the Trustees to give to the President of the University the following powers:

'To prescribe the duties of the professors and teachers; to remove professors and teachers at will; to prescribe and enforce the course of study and the mode and manner of teaching; such other powers as will enable him to control the educational part of the University to such an extent that he may justly be held responsible for the course of study therein and for the good conduct and capacity of the professors and teachers.'

Amendments to the Founding Grant

A clause in the Founding Grant reserved to the grantors the right to alter, amend, or modify the terms and conditions of the grant in important particulars. Under this provision amendments were made by Mrs. Stanford, June 1, 1897; May 31, 1899; March 28, 1902; October 3, 1902; June 1, 1903. These amendments were concerned mainly with matters of detail, but provided also "that the number of women attending the University as students shall at no time ever exceed five hundred."

An Amendment to the Constitution of the State of California, adopted November 6, 1900, "permitted, approved, and confirmed all the trusts, estates, terms, and conditions" of the Founding Grant and of all the deeds, conveyances, and other instruments made and delivered before that date, and authorized the Legislature, under certain conditions, to exempt the property of the University from taxation. Article 13 of the State Constitution, as amended November 3, 1914, exempts from taxation the buildings, grounds (not exceeding one hundred acres), equipment, securities, and income, used exclusively for educational purposes, of any educational institution of collegiate grade not conducted for profit.

The University Faculty

'The Trustees shall constitute the President and professors the faculty of the University, and shall prescribe their powers and duties as such.'

Under the Articles of Organization, adopted by the Board of Trustees March 31, 1904, the power and authority of the University Faculty is vested in the Academic Council, consisting of the president of the University, the professors and associate professors, the librarian, the registrar, the academic secretary, such assistant professors as have been upon the roll of the faculty for three years, whether as assistant professors or instructors, and such other officers of the University or members of the teaching staff as the Academic Council may, with the assent of the Board of Trustees, determine.

All general University regulations, statutes, and rules as to matters within the province of the faculty, must be initiated in and passed by the Academic Council. The Academic Council has general power and responsibility for the internal administration of the University, subject to express provisions contained in the Articles of Organization respecting the methods of exercising such powers through the President of the University, the Advisory Board, the Standing Committees, and the Department Faculties.

The Advisory Board consists of nine members of the rank of professor, one from each of the five department groups, and four chosen without reference to groups. All executive acts of general importance, such as recommendations for appointments, promotions, and dismissals, for the creation of new departments or chairs, etc., must be submitted by the President to the Advisory Board. The Advisory Board is also privileged to make such recommendations to the President, regarding policy, as it may decide by vote to be expedient, but no recommendations for appointments, promotions, or dismissals, may originate with the Advisory Board.

The Executive Committee of the Academic Council consists of the president, vice-president, registrar, academic secretary, and two members from each department group elected by the Academic Council. The Executive Committee appoints the Academic Committees of the Council.

The Standing Administrative Committees of the Council are appointed by the President.

The Department Faculties consist of the professors, associate professors, assistant professors, and instructors in the several departments, but only members of the Academic Council have the right to vote. A Department Faculty has direction of the work of instruction in the department and of the internal administration of the department, subject only to such control as is vested in the Board of Trustees, the President of the University, and the Academic Council. The Executive Head of the Department Faculty is designated by the President with the approval of the Advisory Board and of the Board of Trustees.

DEPARTMENTS

The work of the University embraces the following departments, divided into groups for the purpose of elections to the Advisory Board and Executive Committee, as indicated:

(I) Greek, Latin, Germanic Languages, Romanic Languages, English; (II) Botany, Physiology and Histology, Zoology, Entomology and Bionomics, Medicine, Anatomy, Bacteriology and Immunology; (III) Psychology, Mathematics, Physics, Chemistry, Geology and Mining; (IV) Philosophy, Education, History, Economics, Law; (V) Applied Mathematics, Civil Engineering, Mechanical Engineering, Electrical Engineering.

The Marine Biological Laboratory, founded by the liberality of Mr. Timothy Hopkins, and located at Pacific Grove, on the Bay of Monterey, is a branch of the biological work of the University.

LOCATION

The seat of the University, except for the advanced and clinical work in Medicine, is at Stanford University, in the Santa Clara Valley, thirty miles southeast of San Francisco, on the Coast Division of the Southern Pacific Railway. The grounds of the University consist of over seven thousand acres, partly level and partly rising into the foothills of the Santa Cruz Range. The Bay of San Francisco lies about three miles east of the University grounds. Across the bay the Mount Diablo Range rises to a height of over four thousand feet, the Lick Observatory crowning Mt. Hamilton, the highest of the range. The Santa Clara Valley is one of the most attractive portions of the State in fertility, in natural beauty, and in the excellence of its climate. In winter the mercury rarely falls below 30 degrees, with an average midday temperature of about 55 degrees. In summer the midday temperature ranges between 60 degrees and 80 degrees, with occasional higher and lower numbers, the average being about 70 degrees; the nights are cool, the usual range being from 50 degrees to 58 degrees. The rainfall, normally about eighteen inches, is chiefly confined to the months from December to April, inclusive.

BUILDINGS

The central group of buildings, constituting two quadrangles, the one surrounding the other, is an adaptation of the Mission Architecture, and reproduces on an imposing scale the open arches, long colonnades, and red tile roofing of the old Spanish Missions of California. The Inner Quadrangle consists of twelve one-story buildings and the Memorial Church, connected by a continuous open arcade, and surrounding a court 586 feet long by 246 feet wide, or three and a quarter acres. The buildings are of buff sandstone, somewhat varied in color, the stonework of broken ashlar, with rough rock-face, and the roofs covered with red tile.

The fourteen buildings of the Outer Quadrangle are constructed of the same material and in the same general style as the Inner Quadrangle, with open arcades on the outside. The extreme length of the Outer Quadrangle is 894 feet.

The LELAND STANFORD JUNIOR MUSEUM, situated a quarter of a mile from the Quadrangles, on the west side of the Palto Alto Avenue, contains the archæological and art collections of the University.

The CHEMISTRY BUILDING, located between the Quadrangles and the Museum, consists of two separate structures—the main building and the Assaying Laboratory.

Behind the central quadrangles are located the workshops of the Engineering departments, experimental laboratories, etc.

The dormitories are east and west of the Quadrangles. ENCINA HALL, for men, is at the east, and has accommodations for four hundred and fifty students. ROBLE HALL, for women, is at the west, and will accommodate one hundred students. MADRONO HALL, a frame building, at present leased to private parties, receives only women students. It will accommodate about thirty students.

The MEN'S GYMNASIUM is a brick building with a frontage of 330 feet, situated north of Encina Hall and near the athletic grounds. There are two main divisions separated by a small court. The drill hall is 120x65 feet, with hard maple floor. There are rooms for special exercises, shower and locker rooms in each wing, ample offices, and space for storage and laundry. An outdoor swimming pool, 100x40 feet, has been constructed by the Associated Students, and is available to all men students upon payment of student body dues.

ROBLE GYMNASIUM for women is a frame building equipped with the apparatus and appliances for physical training. A swimming pool, 75x40 feet, is located near the gymnasium. In connection with the pool there are eighteen shower rooms, seventy-two dressing rooms, a laundry and sterilizing plant to care for the swimming suits, and a room for their drying.

The UNIVERSITY INN is a frame building intended primarily as a University commons for students living on the campus.

The THOMAS WELTON STANFORD ART GALLERY, the first building to be constructed in the second quadrangle, is intended primarily for the oil paintings presented to the University by Trustee Thomas Welton

Stanford, of Australia. This building, which sets the architectural style for the new quadrangle, has the same arched arcades as the original quadrangle, but the arched entrances, of which there are three, are higher and more elaborate in detail. The building will be completed in 1917.

The grounds immediately about the University have been reserved in part for experimental and ornamental purposes, in part as residence sites for members of the Faculty and others who may desire to live on the University campus.

The main buildings of the MEDICAL DEPARTMENT in San Francisco occupy four fifty-vara lots bounded by Clay, Sacramento, and Webster streets. The Clinical and Laboratory Building, including Lane Hall and Lane Hospital, is a modern building in brick and stone, with a capacity of one hundred and eighty beds. The Lane Medical Library is situated on the corner of Sacramento and Webster streets, opposite the Clinical and Laboratory Building. The Library is a fireproof structure of Colusa sandstone, three and a half stories high, with steel stacks accommodating 60,000 volumes. A new surgical pavilion, to be known as the Stanford Hospital, is under construction and will be ready for occupancy in September, 1917. Accommodations will be provided for one hundred and eighty patients.

The buildings of the MARINE BIOLOGICAL LABORATORY are located at Pacific Grove. They consist of two two-story structures, and contain four general laboratories, one lecture room, seventeen private rooms for investigation, and a dark room for photography. A new site of ten acres, at Chinese Point, has been secured for the LABORATORY, and a concrete building specially planned for the uses of the LABORATORY will be completed in time for the session of 1917.

CLUB-HOUSES

The STANFORD UNION is a club-house for men, first projected by Herbert C. Hoover of the class of 1895, and built by contributions from students, alumni, faculty, trustees, and friends of the University. The Union was opened in February, 1915, and is in charge of a Board of Trustees made up of two faculty members, three alumni, and two undergraduates.

The WOMEN'S CLUB-HOUSE provides a social center for the women of the University, and is similar in plan and construction to that of the Union. The club-house was opened in February, 1915.

ADMISSION TO THE UNIVERSITY

CANDIDATES must be at least sixteen years of age. They must present satisfactory recommendations as to personal character and must offer approved credentials as indicated below. Application forms for candidates from other colleges and universities, and recommendation blanks for candidates from preparatory schools, may be obtained on application to the Registrar.

SPECIAL REGULATIONS GOVERNING ADMISSION OF MEN

Candidates for admission approved by the Committee on Admission and Advanced Standing are classified in four groups, as defined below. Those placed in Groups I and II will be admitted without numerical restriction. In Groups III and IV the number of matriculants is limited to a maximum of 450 for the autumn quarter, and fifty each for the two succeeding quarters. For the present no limit (below 450) will be placed upon the summer quarter, except that if more than 50 summer matriculants in Groups III and IV re-register for the autumn quarter the 450 matriculants allotted to the autumn quarter shall be correspondingly reduced. (These regulations do not, for the present, imply any restriction upon the number to be admitted from Group III, and candidates placed in this group are practically assured of admission.) No additions to Group III will be made after August 15th, December 20th, March 15th, and June 1st, respectively, for the next succeeding quarter. Credentials of lower division candidates not placed in Group III will be canvassed immediately after the dates named; those approved by the Committee will be placed in Group IV and will be certified for admission in order of merit until the limit fixed has been reached.

GROUP I: GRADUATE STANDING.—Graduates of colleges and universities of recognized standing whose credentials evidence ability and promise and who expect to become candidates for advanced degrees, or for the high school teacher's certificate, or who purpose to pursue regular advanced, professional, or research courses.

GROUP II: UNDERGRADUATE STANDING (Upper Division).—Students from colleges and universities of recognized standing whose previous record has been thoroughly satisfactory, and who present credentials showing full satisfaction of requirements for undergraduate standing and the completion of college courses amounting to 67 or more units (one and a half years).

Fully recommended graduates of State Normal Schools and of other normal schools of equal standing, and advanced students from the High School Junior Colleges, may also be placed in Group II.

GROUP III: UNDERGRADUATE STANDING (Lower Division A).—

(1) *On Examination.* Candidates who have passed the regular entrance examinations of the College Entrance Examination Board in subjects aggregating fifteen units; or who have passed the comprehensive examinations in four subjects designated by the University. Permission to take the comprehensive examinations will be based upon the completion with credit of a four years' high school course or its equivalent; at least two of the examinations must be of an advanced character.

(2) *On Recommendation.* Graduates of approved preparatory schools who have attained recommending grades in subjects aggregating fifteen entrance units. In schools which do not distinguish between a passing and a recommending standard the average grade must be at least ten per cent above the lowest passing grade, and no grade shall be acceptable unless it be at least five per cent above the lowest passing grade.

Holders of New York Regents' Diplomas granted *with credit,* and candidates from China, Japan, and other foreign countries who present credentials equivalent to those named above, and whose command of written and spoken English shall be deemed adequate for purposes of college study, may also be placed in this category.

(3) *On College Credentials.* Students from colleges and universities of recognized standing whose previous record has been thoroughly satisfactory, and who present credentials showing full satisfaction of requirements for undergraduate standing and the completion of college courses amounting to less than 67 units (one and a half years).

GROUP IV: UNDERGRADUATE STANDING (Lower Division B).—

(1) Candidates of approved preparatory schools who have not obtained recommending grades in the requisite number of subjects, but who are recommended in fifteen units on the basis of a general high average or decided intellectual promise.

(2) Men of considerable maturity, twenty-one years of age or older, who do not fulfill the requirements for regular undergraduate standing, but whose incomplete preparation has been supplemented by practical training and experience of distinct educative value.

(3) Candidates from other colleges and universities who do not fully meet the requirements under Group III, but who nevertheless give promise of thoroughly successful work.

(4) Candidates ordinarily classified in Group III whose credentials are received after August 15th, December 20th, March 15th, and June 1st, respectively.

Special Regulations Governing Admission of Women

The Founding Grant of the University, as amended May 31, 1899, directs "that the number of women attending the University as students shall at no time ever exceed five hundred." In conforming to this provision the following plan of admission has been adopted:

Women once admitted to the University will be allowed to continue without further application, so long as scholarship and conduct are satisfactory, and provided they present themselves for registration on the regularly appointed days; except that special restrictions apply to registration for the summer quarter and to summer matriculants desiring to re-register for succeeding quarters. Places will not be held for women students after the regular registration days, except by permission of the Committee on Registration granted in advance.

The same scholarship standards apply as in the case of men.

Graduates of other colleges and universities of recognized standing whose credentials evidence ability and promise, and who expect to become candidates for advanced degrees, or for the high school teacher's certificate, or who purpose to pursue regular advanced, professional, or research courses, may be placed upon the Preferred List provided they make formal application (on blanks to be obtained of the Registrar) not later than September 1st, December 20th, March 15th, and June 1st, respectively, for the next succeeding quarter, and provided credentials are filed by the dates named.

Candidates for undergraduate standing whose credentials, besides fulfilling the entrance requirements of the University, indicate exceptionally high scholarship and special fitness, may also be placed on the Preferred List at the discretion of the Committee on Admission, provided application is made and credentials filed by July 15th, November 15th, March 1st, and June 1st, respectively, for the next succeeding quarter.

The Preferred List will be begun and closed for undergraduates immediately after July 15th, November 15th, March 1st, and June 1st, respectively. All candidates on the Preferred List are assured of admission if present on the regularly appointed registration days.

For all other candidates Numbered Lists will be begun immediately after July 15th, November 15th, March 1st, and June 1st, respectively, for the next succeeding quarter. Candidates whose credentials are complete and in the hands of the Registrar on the dates specified will be given numbered admission cards in the order of original application. (These numbered cards will be mailed to candidates about the middle of July, or October, as the case may be.) After the first lists are made up additional numbered cards will be issued in the order in which the requirements are fulfilled, the order of original application applying where the complete credentials of more than one candidate are received on the same date.

The regular lists for the summer quarter will be made up immediately after June 1st, but it is not improbable that credentials received after this date will qualify for admission. Matriculation for the summer quarter, however, does not insure registration for any succeeding quarter. Summer matriculants will be considered in the same category as other applicants, and will receive only the advantage which inheres in early application or superior credentials.

On registration day candidates on the numbered list will register according to their serial order and to the estimated number that will not exceed the 500 limit. Should this estimate prove too high the necessary cancellations will be made on the following day, beginning with the highest number. If less than 500 women shall have registered at the close of the regular registration period, others on the numbered list will be permitted to register, in their serial order, until the full number is complete.

Complete credentials comprise: for *first-year standing,* (1) formal application, (2) fifteen accepted entrance units; for *advanced standing,* (1) formal application, (2) full certified statement of college record, including entrance credits, (3) letter of honorable dismissal; for *graduate standing,* (1) formal application, (2) diploma or certificate of graduation, (3) transcript of college record.

ENTRANCE UNITS

An ENTRANCE UNIT represents a year's study in any subject in a secondary school, constituting approximately one quarter of a full year's work. In assigning credit values two laboratory, drawing, or practice periods, not requiring additional study or preparation, are regarded as the equivalent of one recitation period. The length of the school year is assumed to be from thirty-six to forty weeks.

Approved Preparatory Schools

Approved Preparatory Schools are schools maintaining full four years courses of high school work and accredited (1) by The New England College Entrance Certificate Board, by The North Central Association of Colleges and Secondary Schools, by colleges and universities of recognized standing, or (2) upon inspection undertaken or authorized by the University.

The University records of first-year students will be considered as additional evidence of the standing of preparatory schools and of their good faith and success in meeting the requirements of the University, and such evidence will be made use of in determining as to the continuance of accrediting relations.

Entrance on Examination

The University holds no entrance examinations, and does not admit students with entrance deficiencies. In general, candidates are advised to remain in the preparatory school until they fulfill the requirements for admission on recommendation; but if prepared to enter on examination, or desiring to supplement incomplete recommendation, they should take the examinations of the College Entrance Examination Board which are held simultaneously in all parts of the United States and in various foreign countries.

In 1917 the entrance examinations of the College Entrance Examination Board will be held June 18-23 (in California, at Berkeley, Los Angeles, and other places).

All applications for examination must be addressed to the Secretary of the College Entrance Examination Board, 431 West 117th street, New York, N. Y., and must be made upon a blank form to be obtained from the Secretary of the Board upon application.

If the application is received sufficiently early the examination fee will be $5.00 for candidates examined in the United States and Canada and $15.00 for candidates examined outside of the United States and Canada. The fee should be remitted by postal order, express order, or draft on New York to the order of the College Entrance Examination Board.

The applications and fees of candidates who wish to be examined outside of the United States and Canada must reach the Secretary of the Board at least five weeks in advance of the first day of the examinations, that is, on or before Monday, May 14, 1917.

The applications and fees of candidates who wish to be examined in the United States at points west of the Mississippi River must be received at least three weeks in advance of the examinations, that is, on or before Monday, May 28, 1917.

The applications and fees of candidates who wish to be examined in the United States at points east of the Mississippi River or on the Mississippi River must be received at least two weeks in advance of the first day of the examinations, that is, on or before Monday, June 4, 1917.

When the candidate has failed to obtain the required blank form of application for examination the usual examination fee will be accepted if the fee arrive not later than the specified date accompanied by a memorandum containing the name and address of the candidate, the examination centre at which he wishes to present himself, and a list of all the subjects in which he may have occasion to take the Board's examinations.

Applications received later than the dates named will be accepted when it is possible to arrange for the admission of the candidates concerned, but only upon the payment of $5 in addition to the usual fee.

A list of the places at which examinations are to be held by the Board is published about March 1st of each year. Requests that the examinations be held at particular points, to receive proper consideration, should be transmitted to the Secretary of the Board not later than February 1st.

In these examinations the University will accept a mark of 60 as the lowest passing grade.

A Definition of Requirements in the various subjects in which examinations are held is given in Document No. 82, issued by the Board. (Price 10 cents: address Secretary, College Entrance Examination Board, 431 West 117th street, New York, N. Y.)

ENTRANCE SUBJECTS

The standard of preparation is the four years high school course. The proper co-ordination of high school subjects for the individual pupil is regarded as primarily a problem for the secondary school; the University is prepared to recognize for entrance credit any subject having an established place in the secondary school curriculum, in which adequate instruction is given and which is pursued to satisfactory results.

No prescription, other than English, is made. Candidates desiring to study mathematics must obviously offer such elementary mathematics as is not taught in the University, and engineering students are expected to offer also solid geometry and trigonometry. Candidates desiring to study Latin should offer at least two entrance units in that subject.

All first-year undergraduates (including special students, and students coming from other institutions with less than twenty units of advanced credit) will be required to satisfy the University standard in English Composition. This may be done by passing a special Matriculation Test given during matriculation week. The examination will test the candidate's ability to write exercises not only free from marked deficiencies in spelling, punctuation, sentence structure, and paragraphing, but also indicative of his ability to think consecutively on a simple subject. The subjects which are set at the time of the examination will be drawn for the most part from the candidate's own experiences.

A student who passes this test may be exempted from Composition work in the University, or may enter Course 2 in the Department of English. A student who does not pass will be required to register in English A at once (unless, by reason of numbers, such registration is postponed to a later quarter), and remain in the course until his work is of passing grade. Some students, whose work shows exceptional promise of maturity, may be assigned to English 2 instead.

DEFINITION OF HIGH-SCHOOL SUBJECTS

The definition of high-school subjects given by the College Entrance Examination Board (Document No. 82 issued by the Board) will serve as a standard, and also, for California schools, the outline prepared by the University of California. The following suggestions and explanations will indicate the attitude of the University in judging entrance credentials, but no attempt is made to enumerate all the subjects which may be properly included in the high school curriculum.

1. **English.**—The work in English Composition should be given at least two recitations a week throughout the entire high school course. The greater part of this time should be devoted to practice in writing, but it is recommended that some attention be also paid to instruction in the fundamental principles of formal rhetoric.

The work in English Literature should be given an average of at least three recitations a week throughout the four years of the preparatory course. It should be so conducted as to give the student not only an appreciative understanding of the books selected either for general or for more intensive study, but also a knowledge of their place in the history of English Literature, and especially an ability to read aloud intelligently both prose and verse.

In the History of English Literature preparation should consist in a brief outline with a view to making clear the character and the tendencies of the more important literary epochs and associating the chief books and authors in their proper periods.

2. **Mathematics.**—The work in Mathematics is usually distributed as indicated by the following unit values: algebra (1 to 2), plane geometry (1), solid geometry (½), trigonometry (½). Additional work may be offered in algebra and plane analytical geometry. The solution of numerous original problems and exercises is assumed throughout the course.

3. **The Sciences.**—In Physics, Chemistry, Physiology, Botany, Zoology, Hygiene, and General Science a full year's work in each is expected, comprising, preferably, two recitation periods and three double laboratory periods per week. Accurate notes of the laboratory work should be kept. Any two of the biological sciences (Physiology, Botany, Zoology) may be combined into a continuous year's course. Astronomy may be offered as a half-unit course.

Students who receive entrance credit in Chemistry, and who wish to continue the subject in the University, will be admitted at once to course *a*II and will be required to begin course I.

In Physiology the text-book work should be accompanied by experiment, dissection of animals and organs, and a certain amount of study of the tissues with the microscope.

In Botany the main thing is that the work shall be of a practical nature; that the study be mainly specimens and not books. A study of the growth and development of the forms selected is of the highest importance, and should be made a prominent feature in the work. If possible, the pupil should be allowed the use of a compound microscope; but when this is not practicable, miscroscopic demonstrations by the instructor are indispensable.

In Hygiene the work should include adequate instruction in personal hygiene, the hygiene of occupation, and the relation of the citizen to the State in matters of sanitation and public health. Three periods per week of physical training and three periods in experimental laboratory work in Hygiene, and two recitations per week on Public Health, or an equivalent amount of work distributed over a longer period, will cover the requirements for one unit of credit.

4. **History and Allied Subjects.**—History should be offered in full unit courses covering respectively the following divisions: (*a*) Ancient, (*b*) Mediæval and Modern, (*c*) English, (*d*) American. Civics may be offered as a part of American History, or as an additional half-unit course. Biblical History and Literature and Economics may each be offered as a half-unit or as a unit course.

In the History subjects, in addition to the text-book preparation, the following exercises are recommended: Supplementary reading, including the use of original material where possible, notes and digests of reading; abstracts or analyses of specified chapters, both of the text-book and supplementary reading; outlines of subjects, gathering material from all available sources; map drawing from printed data or comparison of existing maps, showing movements of exploration, migration or conquest, territorial changes, or social phenomena. Such work should be regarded as a means rather than the end of historical study, and in every instance should be adapted in character and amount to the stage of advancement of the class and of the individual pupil. As the pupil progresses in his study, more advanced work may well be required in the form of historical composition, and of note-taking in the class from talks by the teacher or reports of fellow pupils.

5-6. Spanish and French.—The elementary study of the languages, covering two years of daily recitations, should lay stress on the following points: (1) An accurate knowledge of the forms of the languages: (2) the elements of syntax; (3) the ability to turn easy English prose into French or Spanish; (4) the ability to translate ordinary French or Spanish into idiomatic English; (5) the ability to pronounce French and Spanish correctly.

The Intermediate requirements are intended to represent a third year of daily recitations. The specific demands are: (1) A thorough knowledge of modern French and Spanish syntax; (2) the ability to turn ordinary modern French and Spanish at sight into idiomatic English; (3) the ability to translate connected English prose of moderate difficulty into French or Spanish; (4) the ability to write French or Spanish from dictation; (5) some facility in speaking the languages.

The Advanced requirements will occupy a fourth year of daily recitations. At the end of this course the student should be able: (1) To read at sight any standard author not earlier than the seventeenth century; (2) to write in French or Spanish a short essay on some simple subject connected with the works read; (3) to translate correctly a passage of modern English prose; (4) to carry on a simple conversation in French or Spanish; (5) to follow a lecture in French or Spanish.

The reading in the Elementary course should cover from four hundred to six hundred duodecimo pages; in the Intermediate course a similar amount should be read of prose and verse, a portion to be in the dramatic form; and in the Advanced course the same quantity of prose and verse should be selected from standard authors not earlier than the seventeenth century, and these should be read with reference to their literary value.

The practice of writing compositions consisting in reproductions or paraphrases of the matter read should be begun in the Intermediate course and followed by short themes along similar lines in the Advanced course.

7. German.—The elementary study of the language, covering two years of daily recitations, should include the following requirements: The ability to read understandingly easy German prose and verse at sight; an accurate knowledge of the most important elements of grammar, embracing especially inflections, word-order, and the essentials of syntax, as also the ability to appreciate the force of prefixes and suffixes; the ability to express in correct German simple ideas concerning familiar things; the ability to make oral use of the German learned and to recognize German words and simple sentences when spoken. Careful attention should be given to pronunciation and accentuation, in order to insure the power to read German fluently and intelligently.

This preparation is represented, approximately, *in reading,* by material of the character of Thomas and Hervey's Reader, and the careful study of one or more modern dramas (about two hundred duodecimo pages of easy German), supplemented by the reading of German lyrics and ballads, a number of which should be memorized; *in composition,* by daily practice in reproducing in one form or another the German read and in writing in German.

Intermediate German represents a third year of daily recitations covering the following requirements: The ability to read intelligently ordinary German prose and verse at sight; some knowledge of word-formation and derivation; practical familiarity with the principles of syntax, with special reference to the uses of the tenses and cases, the modal auxiliaries, and the moods; increased ability to write and speak German.

It is believed that this preparation can be acquired by continued practice such as is suggested above, in connection with the careful reading of five hundred duodecimo pages of contemporary and classical prose and verse, in addition to the reading required for Elementary German. It is recommended that about one-half of this reading be selected from the works of living or recent writers, such as Otto Ernst, Storm, Keller, Freytag, etc.; and the other half from such classics as Lessing's Minna von Barnhelm, Schiller's Wilhelm Tell, and Goethe's Wahrheit und Dichtung. Particular attention should be paid to the literary value of the works read. It is also desirable that candidates should acquire the ability to understand and take part in a recitation conducted in German.

Advanced German represents a fourth year covering, in addition to the preparation in Elementary and Intermediate German, the following requirements: A firmer hold on the important elements of German Grammar; a thorough knowledge of at least two of the following classics: Goethe's Hermann und Dorothea or his Iphigenia, Lessing's Nathan der Weise, and Schiller's Wallenstein, as well as of two or more recent dramas, all of which should be studied as much as possible with an eye to the appreciation of their literary value; some familiarity with the technical language of literature and science; the ability to compose in German with ease and to follow lectures delivered in German.

8. Latin.—The reading required in elementary and advanced Latin (4 units), without regard to the prescription of particular authors and works, is not less *in amount* than Caesar, Gallic War, I-IV; Cicero, the orations against Catiline, for the Manilian Law, and for Archias; Virgil, Aeneid, I-VI. An equivalent amount of reading from authors other than these specified above may be substituted. The following are suggested: Caesar, Civil War; Eutropius; Nepos; Terence, Phormio; Cicero, Letters; Sallust; Virgil, Bucolics and Georgics; Ovid, Metamorphoses.

Exercises in translation at sight should begin in school with the first lessons in which Latin sentences of any length occur, and should continue throughout the course with sufficient frequency to insure correct methods of work on the part of the student. From the outset particular attention should be given to developing the ability to take in the meaning of each word—and so, gradually, of the whole sentence—as it stands; the sentence should be read and understood in the order of the original, with full appreciation of the force of each word as it comes, so far as this can be known or inferred from that which has preceded and from the form and position of the word itself. The habit of reading in this way should be encouraged and cultivated as the best preparation for all the translating that the student has to do. No translation, however, should be a mechanical metaphrase. Nor should it be a mere loose paraphrase. The full meaning of the passage to be translated, gathered in the way described above, should finally be expressed in clear and natural English.

The school work in Latin should include much reading aloud, writing, from dictation, and translation from the teacher's reading. Learning suitable passages by heart is also very useful, and should be practiced.

The work in composition should give the student a better understanding of the Latin he is reading at the time, if it is prose, and greater facility in reading. It is desirable, however, that there should be systematic and regular work in composition during the time in which poetry is read as well; for this work the prose authors already studied should be used as models.

9. Greek.—In Elementary Greek (2 units) the following requirements should be covered: Grammar, the inflections and the essential points of syntax; Xenophon's Anabasis, Books I-IV, or an equivalent; prose composition. It is expected of every pupil that he be able to read Greek aloud without stumbling.

In Advanced Greek (1 unit): Homer, Iliad, Books I-III, or an equivalent; advanced prose composition. The pupil should have a good acquaintance with the forms and syntax of Homer, and be able to scan any given passage exactly and to read it rhythmically. In the writing of Greek the pupil should have a year's training beyond that required in Elementary Greek.

10. Drawing and Applied Art.—In each of the drawing subjects (Freehand, Mechanical, and Architectural) a unit of credit represents daily double periods for a year or single periods for two years.

In Freehand Drawing approximately two-thirds of the time should be given to representation and one-third to decorative and constructive design. *Representation* should include: Object drawing, boxes, books, bowls, vegetables, machine parts, drawn in various positions with attention to perspective facts in line and also to light and shade; plant forms, seed pods, shells, insects, animals, and simple landscape, drawn in line, in light and shade, and in color; composition, exercises in arrangement and adaptation of pictorial subjects into good composition, using both rhythmic line arrangement and harmonious color. The style of drawing should be direct, facile and effective, adapted to the thing drawn, with refinement in its proper place and vigor in its proper place. The pupil should be equally familiar with the use of pencil and charcoal or brush. *Design* should include (1) Exercises in space filling, borders and all-over patterns with use of geometric and organic forms; (2) principles of constructive and decorative design applied to simple objects, as: in printing, a title-page or program; in textiles, a stencil or embroidery design for a curtain or table-scarf; in wood, working drawings for a chair, table, clock-case, book-rack, etc.; in metal, cabinet hardware and lighting fixtures, etc. Talks supplemented by photographs of the best paintings and architecture, and talks upon taste in home furnishing and appointments, with visits to worthy examples, should supplement the course, with a view to developing an enlightened taste in art.

In Mechanical Drawing the pupil is expected to acquire neatness and accuracy in the use of drawing instruments. This course should include practice in line work, lettering, machine or architectural working drawings, and tracing. Recognition, commensurate with the length of course and the degree of proficiency attained in the use of instruments, will be given, however, to courses consisting of line work, lettering, and the construction of geometric figures.

11. Shopwork.—Two things are expected: First, a knowledge of the materials and tools used, and a thorough understanding of the principles involved in the operation performed; second, manual dexterity, as evidenced by neatness, accuracy, and despatch in the execution of a given piece of work.

Woodworking (½ unit) demands the ability to recognize the common varieties of wood, and some knowledge of their physical properties, such as ease of working, strength, toughness, hardness, etc., is expected. The pupil should be familiar with the uses of the principal hand tools of carpentry and with their care, be able to make the ordinary kinds of joints and splices, and be familiar with the operation of the lathe, jig-, band-, and circular-saws, and planing machines.

Forge Work (½ unit) demands an elementary knowledge of the properties of wrought iron and steel, and of the proper heats at which to work them. The management of forge and fire and the nature and uses of all the ordinary blacksmithing tools should be known. The pupil should be able to execute all of the common forging processes, including the various forms of welds in iron and steel; he is also expected to understand hardening, tempering, and annealing.

Foundry Work (½ unit) demands a knowledge of the tools and processes used in the ordinary forms of green sand moulding and core work. The pupil should have had experience in the operation of the cupola and know how to charge and operate it. He should have a knowledge of the properties of cast iron, and experience in pouring cast iron as well as in moulding.

Machine Shop Work (½ to 1 unit) demands a knowledge of the tools and processes used in the working of iron, steel, and brass. The pupil should be able to execute all forms of vice-work, such as chipping, filing, scraping, fitting, and finishing. He should be familiar, through experience in operation, with the simpler forms of machine tools, such as the lathe, drilling machine, planer, shaper, and milling machine.

12-15.—In Agriculture, Horticulture, Domestic Science, Commercial Subjects, and Music the outline prepared by the University of California is suggested; also, in Music, the definition given by the College Entrance Examination Board.

FEES, EXPENSES, AND AID FUNDS

TUITION AND INCIDENTAL FEES

TUITION FEES are charged in Law, for professional law courses, as follows: to students registering for twelve or more units in law in any quarter, $35 per quarter; to students registering for less than twelve units in law for any quarter, $3 per unit per quarter.

The TUITION FEE in the Department of Medicine is $50 per quarter.

An INCIDENTAL FEE of $10 per quarter, for the autumn, winter, and spring quarters, is charged to all registered students, with the following exceptions: (1) Those registered in the professional courses of Law and Medicine, paying tuition fees in those departments amounting to ten dollars or more per quarter, (2) graduate students doing *bona fide* graduate work, as certified to by the departments concerned, whether as candidates for advanced degrees or not. The Incidental Fee for the summer quarter is $20 for undergraduates, and $10 for graduate students. The charge for either half of the summer quarter will be one-half of the sums named.

Students in laboratory courses pay for the materials which they use, and in various courses syllabus and other fees may be charged. Laboratory and syllabus fees are different for the different courses, ranging from $0.50 to $25 per quarter.

Laboratory fees are ordinarily returnable as follows when duly claimed in writing within two months after the date of withdrawal from the University: thus, the whole amount will be refunded when the student withdraws within one week of the beginning of a quarter, and one-half the amount if the student withdraws before the middle of a quarter; but no fees will be refunded on account of withdrawals after the middle of a quarter, nor unless claimed in writing within two months after the date of withdrawal. (This regulation is not applicable to the Department of Chemistry.)

The GUILD FEE of $2.00 per quarter is charged to all students registered in the University.

The GYMNASIUM FEE of $3.50 per quarter is charged to all undergraduates except those registered in the Medical School in San Francisco.

A DIPLOMA FEE of $5, payable before graduation, is charged all persons receiving degrees from the University.

Cost of Living

The cost of living in Roble Hall, including board, room, light, and heat, averages about $30 per month. Students furnish their own linen, blankets, and towels. Requests for reservation of rooms should be made to the Matron of Roble Hall.

A new residence hall for women is in process of construction, which it is hoped will be ready for the opening of the academic year 1917-18. In this case reservations for rooms in Roble Hall will be transferred to the new building, and a year's residence in the new hall will be required of all women students entering the University for the first time (and not living at home). All applications for rooms in the new building and all questions regarding it, should be sent to the Dean of Women.

Rooms in Encina Hall cost $5.50, $6, $6.50, and $7.50 per month each, with two in a room; $5.50 and $6, with three in a room. Single rooms cost $7.50, $8, and $9 per month. Requests for reservation of rooms should be made to the Clerk of Encina Hall.

Rooms in Encina and Roble Halls are assigned to students under lease for the full term of the college year, provided they remain students of the University. Any student, while enrolled, desiring to cancel the lease, must secure a satisfactory substitute for the unexpired term. As soon as adequate facilities are provided, a year's residence in the Halls will be required of all entering students not living at home.

Students may live outside the Halls only in places approved by the University.

In Palo Alto and College Terrace, at an average distance of a mile and a quarter from the University, rooms and board, in private houses, can be obtained, at from $25 to $35 per month. A considerable number of students live in co-operative clubs, in which the cost of board and room is reduced as low as $20 per month; such rooms are lighted and heated, but usually unfurnished. Special commutation tickets are issued by the Southern Pacific Company, and students living in towns on the line of the railway, from San Francisco to San Jose, easily go to and from the University daily. There is also trolley connection with San Jose, Los Gatos, and intermediate towns.

On arriving at the University, new students may obtain information of rooms and board at the Information Bureau conducted by the Christian Associations. A complete list of approved rooms and boarding places for men is printed in August. Particular inquiries may be addressed to the secretary of the Y. M. C. A. Women students may live only at houses approved by the Dean of Women, a list of which is posted on Registration Day, on the bulletin board, just outside the Dean's office.

The University Inn, located near the Quadrangle, has dining accommodations for about three hundred students. A restaurant is also maintained in the Stanford Union.

Books and stationery will average from eighteen to twenty-five dollars per year.

The necessary expenses of the student, exclusive of clothing and railway fares and of tuition fees in Law and Medicine, range from $125 to $200 per quarter.

The cost of living for students of Medicine in San Francisco is about the same as at Stanford University. There are numerous rooming and boarding houses near the medical buildings.

SELF-SUPPORT OF STUDENTS

A considerable number of students manage, in one way or another, to earn the whole or a part of their expenses while attending the University. Such opportunities occur in the line of office and laboratory assistance, personal services of numerous kinds, the management of various student enterprises, agencies for laundries, etc.

The Student Employment Bureau (for men, in charge of the Christian Associations; for women, in charge of the Dean of Women) registers without charge all students who apply for employment, and supplies employers with student labor as demanded. In general, the demand and supply are nearly equal, but the attention of new students who intend to earn the whole or part of their living is called to the following result of past experiences:

1. There is a constant *over-supply* of those wishing to do teaching and clerical work. None but those having superior qualifications and experience are likely to secure employment the first quarter.

2. There is a considerable demand for efficient stenographers and typewriters; also for men and especially women who can do domestic labor of any kind; board and room rent may be earned by waiting on table, washing dishes, general housework, house cleaning, gardening, etc.

3. Students who can do any kind of domestic or manual labor *well,* and who have thoroughly good health, can earn their board by three hours' work per day, or board and room by four hours' work per day. Those who are bookbinders, printers, mechanics, or carpenters, will have a decided advantage in obtaining employment. *But no student is advised to come to the University without resources sufficient for the expenses of one quarter.*

4. The University curriculum is adapted to those who have control of their entire time for study. The student who must earn his living, therefore, should expect to take less than the usual amount of university work.

5. No student should come expecting to earn money, who can do nothing well; skill is absolutely essential, as competition is quite as severe in the college community as elsewhere.

6. Opportunities for earning money during the summer can usually be counted on, the demand for canvassers being most constant.

Particular inquiries concerning opportunities for self-support should be addressed to the Secretary of the Y. M. C. A., and, for women, to the Dean of Women. Upon arrival at the University new students should report for registration and information to the Information Bureau of the Association, or, if women, to the office of the Dean of Women.

SCHOLARSHIPS AND ASSISTANTSHIPS

There are a number of student-assistant positions in the various departments, held by either undergraduates or graduates, ranging in pay from $35 to $150 each per quarter, the average being about $75 per quarter. These do not include a considerable number of minor positions in laboratories or elsewhere where mere labor without skill or special knowledge is required, nor do they include those positions where the full time of the assistant is demanded.

Each department selects and recommends for appointment its own assistants. Requests for information as to pay and duties and applications for appointment should be addressed to the Executive Head of the department in which a position is sought.

Loan Funds

The following loan funds (with the exception of the Women's Student Loan Fund) are administered by the Committee on Scholarship. In general not more than one hundred dollars may be loaned to any one student, and provision is made for repayment, without interest, not later than one year after date of graduation or withdrawal from the University. Applications should be filed with the Academic Secretary of the University.

William Burton Barber Loan Fund.—Established by Mrs. Anna M. Barber, in memory of her son, William Burton Barber, '02, "to provide for needy and worthy students." This fund is available for men and women of the senior class who have been registered in the University for at least three quarters. $700.

Stanford Alumni Association Graduate Loan Fund.—Loans are restricted to candidates for advanced degrees, including the A.M., J.D., M.D., and Ph.D. degrees, preference being given to candidates for the Ph.D. degree. In making loans emphasis shall be placed upon character, scholarship, and intellectual promise, in addition to personal need. $245.

Stanford Alumni Association Undergraduate Loan Fund.—"For worthy undergraduates." $500.

Harker Alumnae Association Loan Fund.—Established by the Alumnae Association of Miss Harker's School, a large number of whose graduates have been Stanford students. There are no restrictions except that if a graduate of Miss Harker's School applies she shall be given preference, other qualifications being equal. $225.

Class of 1906 Loan Fund.—No restrictions except such as may be imposed by the Committee on Scholarship. $100.

Associated Students Undergraduate Loan Fund.—For the benefit of worthy undergraduates who are members of the Associated Students of Stanford University. $500.

Women's Student Loan Fund.—The Women's Student Loan Fund was organized by the Women's Conference and by private subscription, and is increased yearly by small sums earned by a committee of the Conference. It is available on the following conditions, for small emergency loans: (1) No interest to be charged until one year after the student leaves the University; interest then begins at six per cent, and is payable annually; (2) All loans to be paid within five years after the student leaves the University. Applications for loans from this fund should be made to the Dean of Women.

The Dickey Scholarship Fund

The Trustees of the University have received from the estate of the late W. J. Dickey, of Fresno, the sum of ten thousand dollars for the establishment of the Dickey Scholarship Fund "to aid young men from Fresno County, preferably from Fresno City, to make their way through Stanford University." The Trustees of the Dickey Estate are Mr. Bernard Faymonville, Vice-President of the Fireman's Fund Insurance Company, San Francisco; Mr. E. A. Waldron, Cashier of the First National Bank of Fresno, and Mr. M. B. Harris, of the Fresno bar. The selection and appointment of the W. J. Dickey scholars shall be made by the President upon the recommendation of the

Committee on Scholarship, subject to the provision that the trustees under the will of Mr. Dickey shall be consulted and their advice taken before any appointment is made. No one shall be appointed to a Dickey Scholarship unless he shall have been a resident of the County of Fresno, and preferably of the City of Fresno, for at least two years prior to his appointment; and no scholarship shall be held or shared by one person for more than four years.

No one shall be appointed to a W. J. Dickey scholarship unless he has fulfilled all the requirements for regular standing in the University.

Other things being equal, preference shall be given, in making appointments, to first-year students.

Appointments shall be made for the college year, but may be terminated earlier at the discretion of the committee. Appointments may be renewed at the discretion of the committee, for a total period not to exceed four years.

In making its recommendation the Faculty Committee shall keep in mind that the donor of the J. W. Dickey scholarship fund wished the benefits therefrom to be derived by persons who are financially unable to make their way through college. In addition to this fact, character, scholarship, and seriousness of purpose shall be taken into consideration in determining appointments.

The W. J. Dickey Scholarship Fund provides for two scholarships of $250 each, payable in nine monthly installments.

Application for appointment to the W. J. Dickey scholarship, with pertinent evidence and testimonials, shall be made to the President of the University, who will refer it to the appropriate committee. Candidates shall be recommended by the committee to the President, who will submit the names to the trustees of the Dickey estate, and upon their approval appointments shall be made by the President of the University.

Memorial Scholarship

The Leland Stanford Junior Scholarship, established by Mrs. Stanford, in 1900, pays the necessary expenses of its holder throughout the undergraduate course. A room in Encina Hall is especially reserved for occupancy by the holder of the scholarship.

The B. G. Higley ('99) Scholarship

Mr. B. G. Higley, of the class of 1899, has established, through the Alumni Association, an annual scholarship of one hundred and fifty dollars, "open to either a man or woman undergraduate student who is in good and regular standing in the University, to whom the money will be a real assistance."

The selection and appointment of the B. G. Higley Scholar will be made by the President upon the recommendation of the Faculty Committee on Scholarship. Appointments will be made for the college year, but may be terminated earlier on recommendation of the Committee and at the discretion of the President.

Applicants for the scholarship must have been registered in the University for at least three quarters prior to the time of application. In making appointments it will be the purpose of the University to emphasize character, scholarship, and intellectual promise, as well as personal need. The scholarship will ordinarily be payable in six equal installments, beginning October 1st. Applications should be filed with the Academic Secretary of the University.

THE MRS. McDOWELL ROBLE CLUB SCHOLARSHIP

The sum of one hundred and fifty dollars per year has been presented to the University by Mrs. JOHN E. McDOWELL for the purpose of establishing a scholarship to be granted to a member of Roble Club who has been a student in the University and a resident of Roble Hall for two years, the award being made at the close of the junior year.

THE GREEK LETTER SORORITY SCHOLARSHIP

The ten Stanford Greek Letter sororities have established an annual scholarship of one hundred dollars, to be awarded to a sorority woman who has been in residence two years, at the close of her junior year. Qualifications for election shall be based on scholarship primarily, but, in addition, character and general excellence shall be considered.

LAW SCHOOL SCHOLARSHIP

Judge GEORGE E. CROTHERS, of the Class of 1895, has established a Law School Scholarship of the value of one hundred dollars annually.

BERTHA HYDE BRALY SCHOLARSHIP

Mrs. J. M. BRALY, of Fresno, has established an annual scholarship of two hundred and fifty dollars, in memory of her daughter, Bertha Hyde Braly, '97. The scholarship is available for a woman student who is a resident of either Fresno County or Santa Clara County.

THE ALUMNI JORDAN SCHOLARSHIPS

The Alumni Jordan Scholarship Fund has been founded largely by physicians who were at one time students of Stanford University. Its purpose is to pay the tuition fees of two or three medical students of high standing, with the understanding that at some future time the amount will be returned without interest. The student who once receives this scholarship loan will be entitled to its use throughout his medical course provided his work continues to be satisfactory.

THE BERNARD SCHOLARSHIP IN ENTOMOLOGY

Mrs. Matilda Bernard, widow of the late Henry M. Bernard of the University of Cambridge, England, has established an annual scholarship in Entomology. The purpose is to defray part of the expenses of a student, who, under the direction of the Department of Entomology, shall carry on an investigation in insect histology having some reference to the biological theories of the late husband of the donor of the scholarship.

THOMAS WELTON STANFORD FELLOWSHIP IN PSYCHIC RESEARCH

From the "Psychic Fund," created by Mr. Thomas Welton Stanford, of Australia, the Trustees have established the Thomas Welton Stanford Fellowship for Research in Psychic Phenomena.

HARVARD CLUB SCHOLARSHIPS

The Harvard Club of San Francisco offers two scholarships, of the annual value of $350 each, to students residing in the neighborhood of San Francisco who may desire to pursue undergraduate studies in Harvard College, or postgraduate studies in Harvard University. Other things being equal, preference will be given to those desiring to pursue undergraduate studies. In awarding these scholarships the scholarly attainments of the applicants as shown by their records, their character needs, and general development, will be considered. Applications should be made in writing not later than February 15th, to the Chairman of the Scholarship Committee of the Harvard Club of San Francisco, Mr. GEORGE S. POTTER, 1827 Pacific Avenue, San Francisco, California.

YALE ALUMNI ASSOCIATION FELLOWSHIP

The Yale Alumni Association of California awards annually the sum of $300 (to which Yale University adds an amount equal to the charge for tuition) to a graduate of the University of California or of Stanford University, for the pursuit of graduate study at Yale. Applications should be addressed to the Secretary of the Yale Alumni Association, University Club, San Francisco.

THE RHODES SCHOLARSHIPS

Under the will of the late Cecil Rhodes two scholarships are assigned to each State and Territory in the United States. Each scholarship has a yearly value of $1,500, and is tenable at any college in the University of Oxford for three successive academic years.

Candidates must be unmarried, must be citizens of the United States, and must be not younger than 19 nor older than 25 on October 1st of the year in which they are elected. All scholars shall have reached before going into residence, at least the end of their sophomore year at some recognized degree-granting university or college. In accordance with the wish of Mr. Rhodes, the trustees desire that "in the election of a student to a scholarship, regard shall be had to (1) his literary and scholastic attainments, (2) his fondness for and success in manly outdoor sports, such as cricket, football, and the like, (3) his qualities of manhood, truth, courage, devotion to duty, sympathy for and protection of the weak, kindliness, unselfishness, and fellowship, and (4) his exhibition during school days of moral force of character, and of instincts to lead and take an interest in his schoolmates."

STUDENTS' GUILD

The Guild is a student organization which seeks to make provision for the care of all cases of serious illness among its members. This is now accomplished for non-contagious diseases, through an arrangement with the Peninsula Hospital at Palo Alto and, for medical students, with the Lane Hospital in San Francisco. For the care of contagious diseases, provision has been made by the maintenance of a Detention Hospital on the University Campus.

All students are required to become members of the Guild by paying the fee, which is two dollars each quarter. A uniform hospital rate of one dollar per day is charged all members of the Guild, in addition to such special charges as may be incurred for extra service.

GENERAL REGULATIONS

REGISTRATION

ON THE appointed Registration Days, in October, January, April and June, each student must obtain a certificate of registration *in person,* at the Registrar's office.

Matriculated undergraduates may register after the appointed Registration Days and during registration week, upon payment of a special fee of two dollars; during the week following the fee for late registration will be four dollars; after that the fee will be increased one dollar for each week's delay. Registration of undergraduates and specials will not be permitted later than one month after the beginning of instruction.

STUDY CARD

At the Registrar's office the student receives a card for selection of studies for the quarter. This card, properly filled out, and approved by the major department, must be filed with the Registrar at the time of registration; but late study cards will be accepted upon payment of a special fee of two dollars. Students registering late are admitted to particular classes only by permission of the instructors concerned. All work for which University credit is desired must be duly registered.

ENROLLMENT IN CLASSES

A student desiring to enter any class must present his certificate of registration to the instructor for enrollment at the beginning of each quarter. Whether the student is qualified for enrollment in a particular class is a question to be decided by the instructor in charge. In general, the prerequisites for taking any given course are noted under "Courses of Instruction."

CHANGE OF STUDIES

A student desiring to drop a subject once taken up, or to take up a new subject after the study card has been filed, must present to the Committee on Registration a petition for such change, approved by the major department and by the instructors whose subjects are to be taken or dropped. In general, petitions so approved, if they do not give the student too many unit-hours, or too few unit-hours, and if presented within three weeks after the beginning of the quarter, are granted without question. If presented at a later time in the quarter they will be granted only for extraordinary reasons, and, where the taking up of new subjects is involved, only on payment of a special fee of two dollars for each course; if otherwise acceptable but presented after the close of the quarter, they will be granted only on payment of a special fee of four dollars for each course. In the case of petitions to drop subjects during the last six weeks of the quarter, action will be deferred until the close of the quarter.

Change of Major Subject

Petitions to change the major subject will be granted when approved by the departments in charge of both the old and the new subjects, the student being held to all the requirements of the new major subject. (First-year students may change their major subject at the end of the first or second quarter without petition.) In general, the major subject may be changed at the end of the first year, and in some cases later, without appreciable loss of time to the student.

Amount of Work

Fifteen hours per week of recitations or lectures or an equivalent in laboratory work, constitutes an average quarter's work. In general, students may register for as few as *thirteen* or as many as *eighteen* unit-hours; but in the case of students doing outside work for self-support or otherwise, and where considerations of health are involved, special restrictions will be made upon recommendation of the medical adviser; and where conditions or failures have been incurred in the preceding quarter, not more than *fifteen* units may be registered unless by special permission of the Committee on Registration granted in advance. Permission to register for less than *thirteen* units may also be granted for special reasons; but registration for less than *ten* units will not ordinarily be accepted. Not more than eighteen units may be credited toward graduation for any quarter's work, unless, in exceptional cases, permission to register for additional units is granted in advance. Graduate students are not held to any special number of unit-hours, but registration will not ordinarily be permitted unless such students are prepared to devote at least half of their working time to University study. Petitions for irregular registration should be presented at the beginning of the quarter.

Every unit for which credit is given is understood to represent approximately, for the average student, three hours of actual work per week, through one quarter. Thus, in lecture or recitation work, for one unit of credit one hour per week may be allotted to the lecture or recitation and two hours for preparation or subsequent reading and study on the part of the student; but if a less amount of time is allotted for preparation or subsequent reading or study, there shall be a proportionate decrease in the amount of credit. Where the time is wholly occupied with drawing, field, or laboratory work, or in the class-room work of conversation classes, three full hours per week through one quarter are expected of the student for each unit of credit; but where such work is supplemented by systematic outside reading or experiment under the direction of the instructor, such a reduction may be made in the actual drawing, field, laboratory, or class-room time as seems just to the department concerned.

Conditions and Failures

A student conditioned in any subject may arrange with the instructor concerned for such supplementary examinations or study as will make good the deficiency; but such deficiency must be removed within one year after the condition is incurred, otherwise the condition will be considered a failure. Work reported as incomplete may be made up during the first or second quarter's registration after the incomplete is incurred; but if not made up until the second quarter, the incomplete work shall be duly entered on the student's study card and shall count as part of the permitted registration for that quarter to the extent of the actual unit-hours required for making up such incomplete work as estimated by the instructors concerned. A student failing in any subject cannot receive credit for the portion in which the failure is incurred until the subject has been re-registered and taken over again in class. A condition or failure or withdrawal from class without permission of the Committee on Registration, limits the student to *fifteen* units the quarter following.

Scholarship Reports and Notices

Mid-semester reports on scholarship shall be obtained from all instructors, and students reported as doing unsatisfactory work shall be notified of their deficiencies.

At the close of each semester each department shall send to the Committee on Scholarship, on blanks to be furnished by the Registrar, a list of such students as, in its opinion, may not profitably continue as major students in the department, together with information as to the reasons for such opinion, causes of unsuccess, qualifications for possible success in other lines of study, etc. (The Committee on Scholarship may require the withdrawal of such students from the University, or may permit re-registration in some other major subject, with the consent of the department concerned.)

At the middle and at the end of the semester each department shall be notified of all serious deficiencies in scholarship affecting students whose major work is in that department.

When a student is seriously delinquent in scholarship, the fact shall be communicated to his parent or guardian.

PROBATION, FAILURES, AND WITHDRAWAL

A student whose work is unsatisfactory may be placed on probation at any time.

A student on probation shall not take part in any intercollegiate contest, nor represent the University in any way, whether individually or in connection with any athletic, literary, musical, dramatic, or other organization.

A student who receives passing grades in less than half the work for which he is registered during his first semester, or in less than two-thirds during any subsequent semester, shall be deemed to have failed in his studies.

After a first failure, unless unusually serious, a student may, with the approval of the major department, again register in the University, but shall be placed on probation for one semester.

A second failure shall result in withdrawal from the University.

A student whose delinquency is unusually serious, or is the result of persistent neglect, may be required to withdraw from the University at any time.

The Committee on Scholarship is authorized, after consultation with the major department concerned, to require withdrawal from the University, without regard to the number of units passed, of any student whose record indicates consistently poor scholarship.

WORK REPORTED INCOMPLETE

Work marked 'incomplete' shall be considered of passing grade only when reported as satisfactory in quality and not seriously deficient in quantity.

LEAVE OF ABSENCE IN CASES OF DELINQUENT SCHOLARSHIP

Leave of absence will not generally be granted to a student on probation, nor to any student whose work during the current semester is unsatisfactory, unless applied for at least six weeks before the end of the semester.

From Special to Regular Standing

Special students may be entered in regular standing and become candidates for graduation, on passing examinations in the required number of entrance subjects, provided such examinations are passed not later than two years after matriculation. In place of entrance examinations, university work to the amount of five units for each entrance deficiency may be offered in university subjects which are also included in the entrance group.

A special student who has completed two hundred and twenty-five units of university work, including all major requirements, and whose general university record is deemed proof of superior scholarship, may become a candidate for graduation on approval of the Committee on Admission and Advanced Standing. Petitions to this end will not be considered by the Committee until after the student has completed one hundred and eighty units of university work.

University Credit for Extra Entrance Subjects

Credit toward graduation may be given for entrance subjects in excess of the number required for admission, provided such extra entrance subjects are also university subjects, and are successfully continued in the University within two years after matriculation, and provided the student's general University record is deemed proof of superior scholarship. In general, four units of advanced credit will be granted for each extra entrance unit representing elementary work in a given subject, and seven units of advanced credit for each extra entrance unit representing advanced work. Application for such university credit must be made within two years after matriculation. After matriculation additional entrance units may be offered only for the purpose of making up entrance deficiencies.

University Credit for Special Courses

Matriculated students on leave of absence may take work in other universities, usually without any restrictions other than those imposed by the institution in question. But work undertaken in any Summer Session may be subject to special regulations, and must be approved by the major department and by the department in which the work is to be taken.

Work of a special character taken outside of regularly scheduled classes, *in absentia* or during summer vacations, may be credited under the following conditions: (1) The work must be acceptable as part of the major requirements for the A. B. degree in the department by which it is authorized, must be authorized by the department faculty concerned, as well as by the instructor under whom it is to be carried on, must be given adequate supervision and direction and subjected to the same tests as in the case of regularly scheduled courses, and must be duly registered with the approval of the Committee on Admission and Advanced Standing; if not registered in advance, a fee of two dollars will be charged for late registration; (2) such work may not be offered to cover deficiencies due to poor scholarship; (3) a fee to the University of two dollars per semester unit must be paid before credit is entered.

The last quarter's work of every candidate for a degree must be taken in this University; but in special cases, students who have obtained at least one hundred and thirty-five units in resident work and who have completed all major department requirements may be exempted from this regulation and permitted to register for special courses under the provisions noted above.

ADVANCED STANDING

Students from institutions of equivalent rank, who maintain a satisfactory record after admission, may expect to receive the same standing as at the former institution, except that no such student can be given more than three years' advanced credit (one hundred and thirty-five unit-hours toward graduation), and that differences in standard of entrance preparation will be taken account of. Every candidate must present a full certified transcript of his college record, including entrance credit, and a letter of honorable dismissal.

Recommended graduates of approved State Normal Schools where the normal training has been preceded by a full four years' high school course, or where high school and normal school course together cover six years' work, may ordinarily be granted an advanced credit of forty-five units; in cases of superior scholarship this may be increased to sixty-seven units.

Advanced standing for work done before matriculation will generally be given only when certified as having been completed in some institution of recognized collegiate rank, except as provided above for extra entrance units, or, in particular cases, to recommended graduates of approved State Normal Schools. But in special cases permission may be given by the Faculty to receive credit on examination for work equivalent to regular University courses. Application for such examinations, with satisfactory evidence of the work accomplished, must be presented to the Committee on Advanced Standing. Applications for advanced standing on the basis of work done before entering the University must be made within two years after matriculation.

Graduate Standing

Admission to technical graduate standing does not imply admission to candidacy for an advanced degree (for the conditions of such candidacy see p. 82). If graduates of other universities desire to become candidates for the baccalaureate degree, the question of units required for graduation may be waived, upon approval of the Committee on Admission and Advanced Standing, and the degree conferred on the satisfactory completion of not less than forty-five units of university work and the fulfillment of all major and minor requirements. Graduate students not candidates for any degree, may be permitted, upon the approval of the major department, to undertake such work as their previous training seems to warrant.

Leave of Absence

A student desiring to leave the University for a brief time should apply to the Committee on Registration. If leave of absence is desired on account of sickness, the petition must be indorsed by the medical adviser. A leave of absence is merely a justification of the absence and not a relief from the work that has been missed. A leave of absence is usually necessary only in case of interrupted work; a student in good standing absent one or more quarters may re-enter at the beginning of any quarter without formal petition.

Honorable Dismissal

An honorable dismissal means that the student is permitted voluntarily to withdraw from the University and is commended to the favorable consideration of any institution he may wish to enter. An honorable dismissal may be granted upon written application to any student not under discipline for misconduct.

Conduct of Students

In the government of the University the largest liberty consistent with good work and good order is allowed. Students are expected to show both within and without the University such respect for order, morality, personal honor, and the rights of others as is demanded of good citizens. Failure to do this will be sufficient cause for removal from the University.

In 1908 the Board of Trustees of the University provided that in all future rentals or leases of houses as fraternity chapter houses it shall be expressly stipulated that no intoxicating liquors of whatever kind shall ever be sold or used on the premises. The Trustees also by formal resolution requested the Academic Council to prohibit the use of liquor in fraternity chapter houses, student club houses, and other student lodgings.

This action of the Board of Trustees is in harmony with the instructions given by the Academic Council to its Committee on Student Affairs, and defines the policy of the University. Prohibition of the use of liquor extends to all student lodgings whether on the campus or elsewhere. The University assumes that the act of registering as a student implies full acceptance of this policy.

Student Control

In 1911-12 the Faculty Committee on Student Affairs entered into an agreement with the University Conferences by which responsibility for the government of the students and for maintaining University standards was assumed by the men and women of the University. The general regulations of the University, standards of conduct, responsibilities, duties, and particular enactments of the Conferences are given in the "Manual of Student Control" printed by the Conferences.

University Health Control

The University exercises an advisory control over student health affairs through the Committee on Public Health.

Every student upon entering the University is required to report for a brief examination. General health and evidence of effective vaccination are the important factors in the examination. Any condition which may place a limitation on the amount or kind of work planned by the student may be discussed with him or made the subject of a report to his major department or to the Committee on Registration.

Students intending to train for any of the athletic teams, or to register for gymnasium work, are required to pass a careful physical examination at the beginning of each quarter.

A careful inspection of all boarding and rooming houses in the community is carried on under the supervision of the Public Health Committee, and only those are permitted to register who arrange to live in houses which have been approved.

VACCINATION

Within three weeks after the day of registration every student must file with the Committee on Public Health a certificate, signed by the vaccinator, who must be a duly licensed and practicing physician, giving exact dates of vaccination, and showing either successful vaccination within seven years, or unsuccessful vaccination twice within the past twelve months.

Non-compliance with these requirements will result in a fine of two dollars after three weeks, and an additional fine of four dollars after five weeks, and cancellation of registration after seven weeks from the day of registration.

All certificates should be filed in person at the office of the Committee on Public Health.. They will be returned upon request. "Conscientious objections" will not be recognized as exempting anyone. Unavoidable delay, or failure to secure a satisfactory certificate, will not exempt anyone from the fine.

"Immunity reaction" will be considered equivalent to one unsuccessful try. Only "vaccinia" will be accepted as successful vaccination.

ROOM CARDS

Every student is required to present at the Registrar's Office, at the time of registration, a properly signed room card. These cards can only be obtained from the owner or manager of the house from whom the room is rented. They are supplied to the house owner or manager by the Public Health Committee if the room meets the University requirements. Students are cautioned to obtain their room card before making a binding agreement for the rental of room.

GRADUATION

CANDIDATES may be presented for graduation in January, April, June, and October.

No degree will be conferred upon any person who has not spent at least one year in resident study at the University. No honorary degrees are given.

Bachelor of Arts

The degree of Bachelor of Arts (A. B.) is conferred upon candidates who have satisfactorily completed a total of one hundred and eighty units of University work and who have also satisfied the requirements in major and minor subjects.

Forty-five units constitute a normal year's work (see p. 73), but the ordinary class divisions (freshman, sophomore, junior, senior) are not recognized by the University. The degree is conferred whenever the requirements are met, without regard to the time spent, except that at least forty-five units (including, except in special cases, the last twenty-two) must be completed in this University.

Each student selects as a Major Subject the work of some one Department. The Major Department has the authority to prescribe not more than sixty units in the Major Subject (exclusive of elementary courses in the Major Department which may be offered for entrance). The Major Department shall also recommend such other courses as it may consider desirable, and shall exercise an advisory supervision over the student's entire curriculum from quarter to quarter. Major Department supervision of the student's study lists shall be administered in the spirit of the major subject system, which is to provide the inexperienced student with necessary advice and direction while developing his power of initiative, and to accord to the mature student larger and larger responsibility in planning his own curriculum. It shall be considered a general principle of University policy, to be departed from only in exceptional cases, that at least ninety of the one hundred and eighty units required for the degree be taken outside of the Major Department.

In applied science the Major Department may prescribe so much of the entire one hundred and eighty units as it shall deem essential to the technical or professional requirements of the major subject.

A course in English Composition (English A) is prescribed for first-year undergraduates who do not satisfy the matriculation test.

Within these limitations the work in all departments is elective, and the student may freely choose any course which his previous studies have prepared him to undertake.

The recommendation of the Major Department is necessary to graduation.

(A student in regular undergraduate standing who does not intend to become a candidate for the A. B. degree, may choose, with the approval of the major department, any courses in the University which his previous training has prepared him to undertake.)

Bachelor of Laws

The degree of Bachelor of Laws (LL. B.) is conferred upon candidates who have satisfactorily completed two years (ninety units) of non-professional study in the pre-legal curriculum and three years of professional study in the law school.

Candidacy for Advanced Degrees

Candidates for advanced degrees must be registered in the University and must file with the Registrar an application for candidacy. In the case of candidates for the degree of Master of Arts or Engineer this application must be accompanied by a programme of study, approved by the department faculty concerned. The approval of this programme of study by the Committee on Graduate Study is necessary for admission to candidacy for the degree. Only under exceptional circumstances will a programme of work be approved by the Committee which is received later than the beginning of the semester preceding the one in which the degree is to be taken. It is advisable that such programme be filed as early as possible in the student's course. Candidates for the degree of Doctor of Philosophy, to gain admission to candidacy, must file in the same manner their programme of study, and obtain the approval of the programme by the Committee on Graduate Study; they must also obtain the final approval of the Committee as set forth below in Section 5 of the conditions governing the granting of that degree. Advanced degrees will be conferred only upon the recommendation of the Committee on Graduate Study.

The Committee on Graduate Study interprets the requirement that statements of candidacy must be filed 'at the beginning of the quarter,' as meaning 'within the first six weeks of the academic year.' In no case will the degree of Master of Arts be conferred in less than three quarters after formal admission to candidacy. Statements once submitted must be kept on file and cannot be withdrawn even after substitutes have been filed and accepted. Candidates for the degrees of Juris Doctor and Doctor of Medicine are exempt from the requirement that a programme of study shall be filed a definite time in advance.

MASTER OF ARTS

The degree of Master of Arts (A. M.) is conferred on graduates of this University, and on others who have had an equivalent training elsewhere, upon the satisfactory completion in residence, of one year of work beyond the baccalaureate requirements of the department in which the degree is sought, and upon the presentation of an approved thesis, and the passing of such general or final examination as the major department may require. A longer period of residence will be required of candidates who are inadequately prepared or who devote less than the normal amount of time to their graduate course. Work may be done in connection with the regular courses of instruction or, as research, independently of them. The programme of study must form a consistent plan of work pursued with some definite aim whether it lies wholly in a single department or field of study, or in more than one. At least two-thirds of a year's work must be devoted to advanced or graduate work in the major study or in intimately allied subjects.

A candidate for the degree of Master of Arts must display ability to do independent work.

A report upon the character of the work done shall be made by each instructor under whom a candidate is registered.

The Master's thesis, bearing the approval of the instructor under whose supervision it was prepared, must be submitted to the Committee on Graduate Study by the date on which instruction closes for the quarter in which the degree is taken; upon acceptance, it shall be suitably bound and placed in the University Library.

The Committee on Graduate Study requires that the original, not a carbon copy, of the Master's thesis, written on paper of standard size and weight, be submitted and filed. The title-page shall be of the form prescribed by the Committee.

ENGINEER

In the Department of Applied Science the professional degree of Engineer is conferred on graduates of this University, and on others who have had an equivalent training elsewhere, upon the satisfactory completion, in residence. of one year of professional study beyond the baccalaureate requirements of the department in which the degree is sought, and upon the presentation of an approved thesis, showing ability to do independent work. Upon the recommendation of the Department, and in order to permit the carrying on of advanced work with equipment or under conditions not available at the University, the requirement of residence may in part be waived.

The special regulations stated above for the degree of Master of Arts apply also to the degree of Engineer.

JURIS DOCTOR

The degree of Juris Doctor (J. D.) is conferred on students who have previously received the academic degree of Bachelor of Arts, or an equivalent degree elsewhere, upon the completion of the three years' professional law course. The first year of the professional law course may be taken by candidates for the A. B. degree.

DOCTOR OF MEDICINE

The degree of Doctor of Medicine (M. D.) is conferred upon students who complete the five years' course in Medicine (which includes the interne year), based upon the three years' pre-medical course as laid down by the University.

DOCTOR OF PHILOSOPHY

The degree of Doctor of Philosophy (Ph. D.) is conferred on graduates of this University, and on others who have had an equivalent training elsewhere, upon the satisfactory completion of at least three years of graduate work, beyond the baccalaureate requirements of the department in which the degree is sought, under the following conditions:

1. At least the last year of study must be spent in residence at this University.

2. At least one year prior to the date when the degree is sought, the candidate must show a reading knowledge of French and German in his special literature. The faculty of the department in which the major work is taken determines whether this requirement has been met.

3. The programme of study must include one major subject and one or two minors. The minor subject or subjects shall represent approximately one-third of the programme of study; except that such minor subjects may be waived upon the recommendation of the major subject department, if approved by the Committee on Graduate Study, when the breadth and extent of the candidate's training appear to the Committee to justify such a course.

4. The candidate must present a thesis at least six weeks before the close of the semester in which the degree is sought, in form and content acceptable to his department and to the Committee on Graduate Study. Before the degree is conferred he must either (*a*) deposit one hundred printed copies of the thesis in the University Library, or (*b*) deposit an original typewritten copy of the thesis with the librarian, and at the same time either deposit the sum of $50 or file an acceptable surety bond in the sum of $100 with the Treasurer of the University, as a guarantee that the thesis will be printed and the required number of copies deposited within two years of the date of receiving his degree.

In case the candidate can present evidence that his thesis, or an acceptable portion of it, has been accepted for publication by a reputable scientific journal or in the proceedings of a learned society, and that publication within two years has been assured, the degree may be conferred after he has deposited, together with the typewritten copy of the thesis, a sufficient sum to cover the cost of one hundred off-prints from the journal or volume in question.

If one hundred copies of the thesis are deposited within the requisite period of two years, the candidate's deposit or bond will be returned to him; if not, the Committee on Graduate Study may use the sum forfeited for the printing, by the University, of the thesis or of such portion as is deemed best.

When the thesis is of unusual length, and at the same time is of such a character that a representative portion, of independent value, can be excerpted, printed copies of this portion may be deposited with the librarian, in place of the whole, with the approval of the department concerned and the Committee on Graduate Study. In such cases the printed portion must amount to not less than twenty-four octavo pages, and must be accompanied by a statement indicating the nature of the entire thesis.

5. Final approval of candidacy must be obtained from the Committee on Graduate Study, not later than the close of the semester next preceding the one in which it is proposed to take the oral examination. This approval will be based on the report of a Special Committee of seven members of the Faculty to be appointed by the Chairman of the Committee on Graduate Study, of whom one member shall be chosen from each department represented by the major and minor subjects of the candidate, and the other members (one of whom shall be designated as chairman) from the faculties of other departments. This special committee shall be appointed at the beginning of the last year of candidacy and shall consider and report (*a*) whether the can-

didate has pursued in a satisfactory manner the programme of study upon which the provisional approval of candidacy was obtained, as evidenced by the record of his studies and by such written work as he may wish to present for inspection; (*b*) whether the preliminary draft of his thesis, or such portion of it as may be deemed representative, gives promise of being completed satisfactorily as provided above; and (*c*) whether he is eligible, in respect of comprehensive grasp of his major and minor subjects, to be admitted to the final oral examination. The report will be based in part on a conference with the candidate ordinarily of not more than one hour's duration. The major and minor departments should also certify to the Special Committee the results of such comprehensive written examinations as can be conveniently set before the time of final approval of candidacy.

6. In addition to satisfying the requirements of major and minor departments, the candidate must pass a final oral examination by an examining committee of the faculty, conducted in the presence of such other members of the faculty as care to attend. This examining committee will consist of (1) the chairman of the Committee on Graduate Study, presiding; (2) the professors of the major subject department; (3) the professor or professors in charge of the minor subject or subjects; (4) two members of the Committee on Graduate Study whose departments lie nearest that of the major professor. The Committee may at its discretion invite other members of the faculty to participate in the oral examination.

ADVANCED DEGREES IN THE MEDICAL DEPARTMENT

The Divisions of the Medical Department are considered as equivalent to other departments of the University in respect to candidacy and requirements for the degrees of Master of Arts and Doctor of Philosophy, and all the foregoing regulations apply to these divisions and division faculties as to departments and department faculties, with the following modifications and limitations:

1. Candidates for these degrees must have received the degree of A. B. at Stanford, or an equivalent degree elsewhere, and must have completed all requirements for admission to the Department of Medicine, and such other requirements as each division faculty may prescribe.

2. Time spent in candidacy for the degree of Master of Arts or Doctor of Philosophy will not be counted toward the degree of Doctor of Medicine.

3. Candidates for these degrees in the divisions of Medicine, Surgery, and Obstetrics and Gynecology, must have received the degree of Doctor of Medicine.

THE HIGH SCHOOL TEACHER'S CERTIFICATE

High school certificates may be issued by County, and City and County Boards of Education under the provisions of Section 1519, subdivision 5 (*a*), Section 1775, subdivision 1 (*a*), and Section 1792 of the Political Code of California, to recommended candidates who meet all the requirements under any one of the groups outlined below.

In addition to the technical requirements prescribed by the State Board of Education the University requires, preliminary to recommendation, the completion of enough work (and of sufficiently high grade), in at least one subject, to secure a department recommendation that the candidate is fitted to teach the subject in high school classes.

GROUP I: STANDARD GROUP

1. A Bachelor's degree from an institution requiring eight years of high school and college work.

2. One year (thirty-nine quarter units) of graduate study (which shall include one full-year course of advanced or graduate work (6 units) in at least one subject in which recommendation is sought) in an institution approved by the State Board of Education.

3. Twenty-three quarter units in Education, including the following courses: (*a*) a course in School and Classroom Management (2 units); (*b*) work in actual practice of teaching, with conferences (6 units); (*c*) a Teacher's Course in at least one subject in which the candidate expects to be recommended for certification, if such course be given in the institution and be accepted or listed under the work in education (5 units maximum for all such courses); (*d*) a course in Secondary Education, presenting particularly the purpose and attainable goals of high school work (3 units); (*e*) such other courses relating to the theory, function, and administration of public education, as are needed to complete the required twenty-three units.

Candidates who have taught or been engaged in school supervision for not less than twenty months in this or any other State, and who present credentials showing that they have done so with reasonable success, may be excused from four of the fifteen of education represented by the practice teaching, and may also be allowed to substitute other work in education for the course in School and Classroom Management.

GROUP II: NORMAL-GRADUATE GROUP

1. A Bachelor's degree from an institution requiring eight years of high school and college work.

2. One half-year (20 quarter units) of graduate study (which shall include 3 units of advanced or graduate work in at least one subject in

which recommendation is sought) in an institution approved by the State Board of Education.

3. Graduation from an approved normal school.

4. Eight quarter units in Education, including (*a*) Secondary Education (3 units); (*b*) a Teachers' Course in at least one subject in which the candidate expects to be recommended for certification, if such course be given in the institution and be accepted by or listed under the work in Education (5 units, maximum for all such courses).

GROUP III: EXPERIENCED-TEACHERS' GROUP

1. A Bachelor's degree from an institution requiring eight years of high school and college work.

2. One half-year (20 quarter units) of graduate study (which shall include 3 units of advanced or graduate work in at least one subject in which recommendation is sought) in an institution approved by the State Board of Education.

3. Twenty months' experience in schools of elementary or secondary grade.

4. Eight quarter units in Education, including (*a*) Secondary Education (3 units); (*b*) a Teachers' Course in at least one subject in which the candidate expects to be recommended for certification, if such course be given in the institution and be accepted by or listed under the work in Education (5 units, maximum for all such courses).

GROUP IV: SPECIAL NORMAL-COURSE GROUP

1. A Bachelor's degree from an institution requiring eight years of high school and college work.

2. One half-year (20 quarter units) of graduate study (which shall include 3 units of advanced or graduate work in at least one subject in which recommendation is sought) in an institution approved by the State Board of Education.

3. Eight quarter units in Education, including (*a*) Secondary Education (3 units); (*b*) a Teachers' Course in at least one subject in which the candidate expects to be recommended for certification, if such course be given in the institution and be accepted by or listed under the work in Education (5 units, maximum for all such courses).

4. One half-year (preceding or following the half-year of work in an approved graduate school) in any California State Normal School which offers a special half year (or two terms) of full time instruction, especially selected for college graduates preparing for high school certification in California, and approved by the State Board of Education.

PRELIMINARY SECONDARY SCHOOL CERTIFICATE

A Preliminary Secondary School Certificate, authorizing the holder to do cadet teaching, without salary, in any secondary school of the county, may be granted to graduate students of any university accredited by the State Board of Education, who present a recommendation from the university that such certificates be granted.

SPECIAL CERTIFICATE

A Special Certificate, authorizing the holder to teach only such branch or branches and in such grades as are named in such certificate (manual and fine arts, technical arts, household arts, commercial subjects, physical culture, music) may be granted as follows:

To recommended candidates who have had at least three years' instruction (for the elementary certificate; four years for the secondary certificate) beyond that required for graduation from a high school maintaining a four-year course in advance of the eighth grade (or who have had an equivalent amount of training); provided that at least one-half of this three years' instruction (for the elementary certificate; four years for the secondary certificate) must have been devoted to study or work in the special subject or subjects in which application for certification is made and in such subjects as are strictly supplementary thereto, as arranged and approved by the recommending authorities of the institution in which the work was taken (or an equivalent amount of special training); *provided* also that two-fifths of a year of the time required to be given to the special subject or subjects must have been devoted to the study of the pedagogical subjects suited to the training of an elementary [or secondary] school teacher; at least one-half of which time must have been devoted to practice teaching, including methods of instruction in the special subject or subjects, under competent supervision.

Time devoted in the secondary school period to study or work in the special subject or subjects in which the candidate desires certification may be substituted at the rate of half-time for similar studies or work in the collegiate period. Such substitution shall not exceed one-half of the total time required in the special subject or subjects. One year's successful experience in teaching may be substituted for half of the required pedagogical work, and two years' teaching experience may be substituted for the entire pedagogical requirement.

PRELIMINARY SPECIAL CERTIFICATE

A Preliminary Special Certificate, authorizing the holder to do cadet teaching, without salary, in the special branch named in the certificate, in any elementary or secondary school in the county, may be granted to students enrolled in any vocational teachers' training course established under the laws of California who present a recommendation from the principal of the school maintaining such course that such certificate be granted.

PERMITS TO TEACH IN INTERMEDIATE SCHOOL COURSES

Holders of elementary school certificates who have completed two years of work in a college, or one year of work in a college in addition to a normal school course, may teach in the third year of any intermediate school course, provided they comply with the following regulations established by the State Board of Education in accordance with subdivision 3b of Section 1771 of the Political Code:

Candidates who are not Graduates of Normal Schools shall present to the County Board of Education a valid certificate of elementary grade issued by a County, or City and County Board of Education in California, and a written statement attested by a college or university listed as such in the latest report of the United States Bureau of Education, that the candidate has completed at least ninety quarter units in regular college courses in such institution, including at least fifteen units of pedagogy, and at least forty-five units in any three of the following departments: English, French, German, Spanish, Latin, History, Mathematics, Physical Science, Biological Science.

Candidates who are Graduates of Normal Schools shall present a diploma of graduation from a California State Normal School or a normal school accredited by the State Board of Education for the elementary certificate, and a written statement attested by a college or university listed as such in the latest report of the United States Bureau of Education, that the candidate has completed at least forty-five quarter units, of which thirty units shall be in regular college courses in such institution, in any two of the following departments: French, English, German, Spanish, Latin, History, Mathematics, Physical Science, Biological Science.

APPOINTMENT OFFICE

The University has established in the President's Office an Appointment Office, the duties of which are to assist students and graduates of the University to obtain permanent employment and promotions, either in the teaching profession or in any other line of work for which they have prepared themselves. The Bureau is in charge of a Secretary who aims to secure and keep on file a complete record of the scholarship, experience, and personal qualifications of each candidate for a position. These records are confidential and intended only for the use of school officers, or of professional or business men who have positions to be filled. Copies of these records will be mailed to such officials, at their request, or at the request of the candidate concerned. Whenever notices of vacancies are received, the Appointment Secretary will recommend the best available person for a given position. Candidates for positions, when asking that copies of their recommendations be mailed, should inform the Appointment Secretary definitely as to the subjects to be taught, or the work to be done, and the time when work is to begin. Prompt replies will be made to all letters received throughout the summer vacation as well as during the University year. The University reserves the right of refusing to extend its co-operation to students who apply for positions for which they are manifestly unfit.

The Appointment Office will be glad to be informed promptly of present or prospective vacancies in positions for which college-trained men or women are eligible.

Blanks for registration may be obtained of the Appointment Secretary. Registration must be renewed yearly, preferably during February or March.

The only charge in connection with this service is the cost of typing and mailing credentials.

Communications should be addressed to the Appointment Secretary, Stanford University, California.

COURSES OF INSTRUCTION

1916—1917

ANATOMY

Arthur William Meyer, Professor.
Edgar Davidson Congdon, Assistant Professor.

Required Courses

1. Osteology.—Students will be expected to familiarize themselves thoroughly, on their own initiative, with the surface anatomy of the bones of the skeleton. The laboratory work will be supplemented by recitations and lectures dealing with the internal architecture, the development, growth, and regeneration of typical bones, their nutrition and innervation, the mechanics of the skeleton as a whole, and the changes it undergoes from birth to old age.

2 to 3 units, 1st semester (Meyer, Congdon)
Lec. S; Lab. W 1:05-4:05

2-3-4. Dissection of (2) the Head, Neck, and Thorax; (3) the Upper Extremity; (4) the Abdomen and Lower Extremity.—These courses are given simultaneously throughout the year and may be begun at any time. No one will be assigned to less than one of the above parts nor will credit be given for less, save by special arrangement.

2 to 5 or more units (Meyer, Congdon)
Lab. S 8-12, F 8-11, Th 8-12

Optional and Advanced Courses

5. Topographical Anatomy.—The work consists of laboratory study of frozen sections of foetal, infantile, and adult cadavers made in various planes, and of dissected and specially injected preparations, supplemented by models and atlases. It is suggested that students who can afford the time supplement courses, 2, 3, and 4 by the respective portions of course 7 immediately on completing the dissection of a part. Open to students who have completed courses 1, 2, 3, and 4.

1 to 5 units (Meyer) By arrangement

6. **Morphogenesis.**—Factors influencing animal form and structure are considered. Especial attention is given to man and mammals. Lectures.

1 unit, 2d semester (CONGDON) Lec. W 8

7. **Human Embryology.**—This course will be offered as soon as adequate provision can be made. Course 11 in the Department of Zoology is a prerequisite. Elective.

8. **Investigation and Special Work.**—The facilities of the laboratory are always at the disposal of properly qualified students or physicians who desire to undertake the investigation of some problem in gross or microscopic anatomy or in embryology. Theses and special work must be arranged for individually, but may begin at any time.

REQUIREMENTS FOR ADVANCED DEGREES.—In addition to the requirements published in the University Register and the Announcement of the School of Medicine, students desiring to be admitted to candidacy for the degree of Master of Arts in Anatomy must have satisfactorily completed one year's work in histology and microscopic anatomy, at least one semester of embryology, and possess a knowledge of laboratory technique adequate for the investigation to be undertaken. For admission to candidacy for the degree of Doctor of Philosophy a reading knowledge of both French and German is further required.

DEPOSIT FEES.—A deposit of $10, to cover damage to or loss of bones, is required of all students in Anatomy. This sum, less charges for damage or loss, is refunded at the close of the academic year, except in the case of students discontinuing Anatomy, who may obtain the refund at the end of the semester. Students of Anatomy who are not registered medical students are charged a fee of $15 for each of courses 2, 3, and 4, and $5 for courses 1 and 5.

Embryology.—Development of the chick through the first three days of incubation. [Course 11 in the Department of Zoology.]

2 units, 1st semester (PRICE)

APPLIED MATHEMATICS

LEANDER MILLER HOSKINS, Professor.

HALCOTT CADWALADER MORENO, SIDNEY DEAN TOWNLEY, WILLIAM ALBERT MANNING, Associate Professors.

ERNEST WILLIAM PONZER, Assistant Professor.

The courses in Applied Mathematics are planned primarily to meet the needs of students in Engineering. The aim is to make these courses practical in the sense of furnishing thorough drill on fundamental principles and much practice in their application. Emphasis is laid upon accuracy and system in the solution of numerical problems. Students whose training in arithmetical work has been deficient, or who are otherwise inadequately prepared, or who lack aptitude for mathematical study, can not pursue these courses successfully.

Students majoring in any Engineering department should have entrance credit in all preparatory subjects in mathematics, including Algebra (at least one and a half units), Plane and Solid Geometry, and Plane Trigonometry. This preparation is required for admission to any of the following courses.*

Course 1 embraces the regular first-year work, and courses 2 and 3 the regular second-year work for all students in Engineering. Those deficient in the work of the first year are not admitted to second-year courses. This requirement will be strictly enforced, whether the previous work has been taken in this University or elsewhere.

1. **First-year Mathematics.**—This course embraces (*a*) Algebra, (*b*) Trigonometry, (*c*) Co-ordinate Geometry. The work begins with a rapid review of elementary algebra, intended to test the student's familiarity with fundamental principles and operations, those showing deficient preparation not being permitted to continue. This review is followed by more advanced work in algebra, but emphasis is laid on the thorough mastery of the ordinary rules rather than on covering a large amount of ground. In the second part of the course much attention is paid to reviewing and enforcing the fundamental principles of plane trigonometry, and especially to the numerical solution of triangles using both natural and logarithmic functions. In co-ordinate geometry it is aimed to familiarize the student with the method of co-ordinates, so that he can apply it independently to simple problems, rather than to devote much attention to a detailed study of the properties of the conic sections or other curves. The course is open to students having entrance credit in Algebra (at least 1½ units), Plane and Solid Geometry, and Plane Trigonometry.

5 units, both semesters (MORENO, MANNING, PONZER)
MTWThF 9, 10

2. **Calculus.**—An elementary course on Differential and Integral Calculus, in which emphasis is laid on fundamental principles and simple applications.

3 units, both semesters (HOSKINS, MORENO, PONZER) MWF 8, 9

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*Courses in Solid Geometry and Trigonometry are given in the Department of Mathematics (courses 1 and 2).

3. Theoretical Mechanics.—An elementary course, covering the fundamental principles of Statics, Kinematics, and Kinetics, restricted mainly to coplanar forces and to plane motion of particles and of rigid bodies. An elementary treatment of Graphic Statics is included. The course is designed as preparation for the courses in Applied Mechanics taken by students of Engineering, but is open to all whose preparation includes the equivalent of course 1. Calculus must either precede this course or be taken at the same time.

5 units, both semesters (HOSKINS, MANNING, TOWNLEY)
MTWThF 10

4. Advanced Calculus.—This course is designed to meet the needs of students who are preparing to pursue the more mathematical parts of engineering theory.

2 units, 1st semester (MORENO)
[Given if there is sufficient demand]

8. Engineering Mathematics.—This course is designed to meet the needs of advanced students in Electrical Engineering, and should be taken by those intending to take course 5 in Electrical Engineering.

2 or 3 units, 1st semester (MORENO) MWF 8

9. Graduate Courses.—Advanced courses in Theoretical Mechanics, Hydromechanics, Theory of Heat, Theory of the Potential Function, Theory of Elasticity, or other subjects, may be arranged for students having the requisite mathematical training.

ASTRONOMY AND GEODESY

The course in Descriptive Astronomy is designed especially to meet the needs of students who have time for only a general knowledge of the subject. Course 11 is designed especially for students of Engineering and Geology who desire a working knowledge of practical astronomy. The other courses are intended for students of Applied Mathematics or Civil Engineering who wish to prepare themselves for geodetic work.

10. Descriptive Astronomy.—This course consists of a general survey of the various branches of astronomy, including a study of the celestial sphere, the bodies of the solar system, comets, the fixed stars, and other heavenly bodies. The treatment is non-mathematical.

3 units, 1st semester (TOWNLEY) MWF 11

11. Practical Astronomy.—The theory and practice of the determination of latitude, azimuth, time, and longitude, with sextant and

engineer's transit. Intended especially to meet the requirements of students of civil engineering. Course 1 and surveying are prerequisites.
3 units, 2d semester (TOWNLEY) MWF 11

12. Advanced Practical Astronomy.—A continuation of course 11. Precise methods of determining time, latitude, etc., by means of the universal instrument.
Either semester, hours and credits to be adjusted (TOWNLEY)

13. Adjustment of Observations.—Theory of the method of least squares, with applications. Credit in course 2 or its equivalent is a prerequisite.
2 units, 1st semester (TOWNLEY) By arrangement

14. Geodesy.—Study of the form and dimensions of the earth and the practical methods of geodetic work. Courses 11 and 13 are prerequisites.
2 units, 2d semester (TOWNLEY) [Not given in 1916-17.]

BACTERIOLOGY AND IMMUNOLOGY

WILFRED HAMILTON MANWARING, Professor.
JOHN TIMON CONNELL, Instructor.
MARCUS CLAUDE TERRY, Clinical Instructor.

[With the co-operation of JAMES IRA WILSON MCMURPHY, Instructor in Botany.]

1. Introductory Bacteriology.—Required medical course. Prerequisites: 90 units of university work (75 units for students majoring in Bacteriology and Immunology), including 12 units of biological science, Chemistry 3*a* and *k*.
3 units, 2d semester (elective quiz, 1 unit) (CONNELL)
Lec. Th 9, (Quiz T 11); Lab. TTh 9-11

2. Pathogenic Bacteriology.—Required medical course. Prerequisites: 105 units of university work (90 units for students majoring in Bacteriology and Immunology), including Physiology 2, 3, 9, Chemistry 3*a*, *k*, and course 1. The course must be preceded or accompanied by Chemistry 11 and *g*.
4 units, 1st semester (elective quiz, 1 unit) (MANWARING, CONNELL)
Lec. M 8, (Quiz W 8); Lab. MT 9-11, Th 1-3

3. Elementary Serology.—Elective course, parallel with course 2.
3 units, 1st semester (MANWARING) Lab. Th 8-12, 2-3

4. Milk, Water, Food, and Drug Analysis.—Prerequisite: course 2.
4 units, 2d semester (CONNELL) [Not given in 1916-17.]

5. Seminary, Journal Club.
2 units, 2d semester.

6. Advanced Work, Research.

FEES.—Courses 1, 3, and 4, $15 each; course 2, $20; courses 2 and 3 taken together in the same semester, $25. Students pay for breakage and animals used.

MAJOR REQUIREMENTS.—German 1, 2*a*; Botany 1; Zoology 1; Physics 7; Chemistry 3*a*, *k*, 11, *g*; Physiology 2, 3, 9; twenty units of Bacteriology and Immunology.

BIBLICAL HISTORY AND LITERATURE

DAVID CHARLES GARDNER, Chaplain, Lecturer.
AUGUSTUS TABER MURRAY (Department of Greek), THERESA PEET RUSSELL (Department of English Literature).

1. Life and Teaching of Christ.—A history of the life and times of Jesus, with a study of the four Gospels, an analysis of the Ethics of Jesus, and the application of his teaching to the life of today. Lectures, discussions, and papers.
1 unit, both semesters (GARDNER) Th 1:05

English Bible.—Representative portions of the Bible studied as literature, with some consideration of the history and the prose style of the English versions. Not open to first-year students. [English 16.]
3 units, 2d semester (RUSSELL) [Not given in 1916-17.]

New Testament Literature.—A critical introduction to the literature of the New Testament for general students; no knowledge of Greek is presupposed. Lectures with assigned readings. [Greek 23.]
2 units, 1st semester (MURRAY) TTh 9

BOTANY

DOUGLAS HOUGHTON CAMPBELL, GEORGE JAMES PEIRCE, Professors.
LEROY ABRAMS, LEONAS LANCELOT BURLINGAME, Associate Professors.
JAMES IRA WILSON MCMURPHY, Instructor.

The Department of Botany aims to provide instruction for two classes of students: (*a*) Students who wish to know something of the structures, life processes, and relationships of plants, and to gain some familiarity with the methods of scientific work; and (*b*) Professional students who look forward to investigation, teaching, or the technical applications of Botany in Plant Breeding, Forestry, Agriculture, Horticulture, Plant Pathology, etc. Course 1, which presents the elements of the more important divisions of botanical study, is designed to meet the needs of both groups of students and must precede all other courses in the department, except in the case of students who have received entrance credit for its equivalent. Courses 2 to 12 are open to students who have had course 1 or its equivalent. It is the aim of these courses to give the student, by means of lectures and references to the literature, a general and summary account of the present state of knowledge, and in the laboratory and the field to afford him an opportunity for a personal acquaintance with plants themselves. Students who have had two or more years' work may, after consultation, be registered in courses 13, 14, 15, 16, 17. The resources of the department afford exceptional opportunity for investigation in a number of fields. Properly qualified students desiring to undertake such investigation should register in courses 20, 21, or 22, after consultation with the instructor concerned.

Major students in the department will be expected to complete 34 units in the department, and Zoology 1. The thirty-four units should include courses 1, 2 or 4, 3, 5, 6, and 7 or 8. It is strongly recommended that courses 2 and 4 be taken in the second year.

The Teacher's Recommendation for High School Botany is based on a minimum of courses 1, 2 or 4, 5, 6, and 7 or 8.

Students looking to Forestry or Agriculture as a profession should include courses 5, 6, 7, 8, 11, 12, and 16, as part of their preparation, and the following subjects in other departments: elementary physics, chemistry, geology and physiography, zoology, entomology, economics, and applied mathematics. They should also be able to read French and German.

Fees are charged in the various courses approximately sufficient to cover the cost of the perishable materials and syllabus used, as follows: Courses 1, 2, 4, 5, 6, 11, 15, $3.00 each; courses 3, 7, 8, 9, 13, 14, 16, 17, $5.00 each.

1. Elementary Botany.—Study of representatives of the principal groups of plants, with lectures upon their morphology and classification; anatomy and physiology of seed plants. (Campbell's University Text-Book of Botany.) Short botanical excursions will be made on five Saturdays in each semester. Attendance on these is not required, but is desirable, and will yield an additional half-unit per semester.

3 or 3½ units, both semesters (CAMPBELL, BURLINGAME, PEIRCE, ABRAMS) Lec. W 1:05; Lab. MT or ThF 1:05-4:05

2. Algae.—Lectures, reading, and laboratory work upon the special morphology and classification of the Algae.

5 units, 1st semester (CAMPBELL)
Lec. W 2:05; Lab. MTThF 1:05-4:05

3. Fungi.—The laboratory work will be devoted to morphology, development, and culture methods; the lectures to systematic relationship, with an account of economically important forms.

3 units, 1st semester (MCMURPHY)
Lec. T 8; Lab. TTh forenoons

4. Archegoniatae.—Special morphology and classification of the Archegoniatae. Continuation of course 2.

5 units, 2d semester (Campbell)
Lec. W 2:05; Lab. MTThF 1:05-4:05

5. Spermatophytes.—A laboratory study of the anatomy and morphology of Seed Plants, with lectures on their evolution and classification.

3 units, 1st semester (BURLINGAME) [Not given in 1916-17.]

6. Classification of the Angiosperms.—Lectures, laboratory, and field work on the classification of the flowering plants.

3 units, 2d semester (ABRAMS)
Lec. W 1:05; Lab. ThF 1:05-4:05

7. Physiology.—Laboratory work, lectures, and reading on Nutrition. (An elementary knowledge of physics and chemistry is a desirable preliminary to this course.)

3 units, 1st semester (PEIRCE) Lec. W 2:05; Lab. MT 1:05-4:05

8. Physiology.—Laboratory work, lectures, and reading on Respiration, Growth, Irritability, and Reproduction. (An elementary knowledge of physics and chemistry is a desirable preliminary to this course.)

3 units, 2d semester (PEIRCE) Lec. W 2:05; Lab. MT 1:05-4:05

9. Botanical Technique.—Lectures and laboratory work. The methods of killing, fixing, preserving, embedding, sectioning, staining, etc., will be taught in connection with the preparation of material for study in the course.

3 units, 2d semester (BURLINGAME)

[Not given in 1916-17; given 1917-18.]

10. Plant Breeding.—A series of lectures and assigned readings on the principles underlying modern practice in the propagation and improvement of plants. An elementary course in botany or its equivalent is a prerequisite.

1 unit, 1st semester (BURLINGAME) Lec. W 3:05

11. Dendrology.—Lectures, laboratory, and field work on the trees and shrubs. Special attention will be given the Gymnosperms.

3 units, 1st semester (ABRAMS)

Lec. W 1:05; Lab. ThF 1:05-4:05

12. Geographical Distribution.—Lectures and reading on the principles of the geographical distribution of plants and the floral regions of the world.

1 unit, 1st semester (CAMPBELL, ABRAMS)

[Not given in 1916-17.]

13. Cytology.—Lectures and laboratory work on the plant cell; the bearings of cytology on evolution, plant breeding, etc. (Open to those who have had course 1. Courses 7 and 8 are desirable preliminaries.)

3 units, 2d semester (BURLINGAME) MWF 9-12

14. Archegoniatae.—Advanced work in special groups.

1st and 2d semesters (CAMPBELL) By arrangement

15. Taxonomy.—A critical study of some family or genus, or the flora of a region, with special reference to nomenclature and the methods of investigation. The laboratory and herbarium work will be supplemented by field work.

(ABRAMS) By arrangement, either semester

16. Plant Pathology.—Lectures, laboratory, and field work on the fungous and other plant diseases. Open only to students who have had course 3 or its equivalent.

3 units, 2d semester (MCMURPHY)

Lec. T 8; Lab. TTh forenoons

17. Advanced Plant Pathology.—Field and laboratory work on special diseases.

1st and 2d semesters (MCMURPHY) By arrangement

20. Research in Morphology.
(CAMPBELL, BURLINGAME)

21. Research in Physiology.
(PEIRCE)

22. Research in Taxonomy and Geographical Distribution.—Western America with its great diversity of climate and topography affords innumerable problems for investigation in taxonomy and plant distribution. The University collections, officially known as the Dudley Herbarium, are rich in material from this region and offer favorable facilities for the pursuit of studies along these lines. (ABRAMS)

CHEMISTRY

JOHN MAXSON STILLMAN, LIONEL REMOND LENOX, EDWARD CURTIS FRANKLIN, STEWART WOODFORD YOUNG, ROBERT ECKLES SWAIN, Professors.

JOHN PEARCE MITCHELL, Associate Professor.

WILLIAM HENRY SLOAN, Assistant Professor

GEORGE SHAMBAUGH BOHART, ALICE RUTH BERGER, WILLIAM EDMUND BURKE, Instructors.

I. LECTURE COURSES

1. General Inorganic Chemistry.—Comprising a systematic treatment of elementary principles and of the properties of the more important elements and their compounds. Open to all students. Those not having entrance credit in Chemistry will register in a three-hour section for the first semester and in laboratory course *a*I.

2 or 3 units, 1st semester; 2 units, 2d semester (MITCHELL)
(I) MWF 8; (II) TTh 8

2. Principles of General and Inorganic Chemistry.—Discussion of the elements of chemical theories and of important generalizations in the field of inorganic chemistry. Open to all students who have completed courses 1 and *a*II.

3 units, both semesters (STILLMAN) MWF 11

3. Organic Chemistry.—Lectures and reviews on the chemistry of carbon compounds. Open to students who have completed courses 1 and *a*.

3 units, both semesters (FRANKLIN) MWF 10

3a. *A condensed course in organic chemistry* is offered for students in medicine. [See Department of Medicine, Division of Chemistry, course 1.]
3 units, 2d semester (SWAIN) MWF 11

4. Industrial Chemistry.—Lectures on fuels, water, acid and alkali manufacturing, explosives, sugar-making and refining, petroleum. Open to students who have completed courses 2 and 3; or may be taken concurrently with course 3.
2 units, both semesters (STILLMAN) MF 9

5. History of Chemistry.—Open to students who have completed courses 2 and 3.
2 units, 1st semester, in alternate years (STILLMAN)
[Given in 1916-17.]

6. Qualitative Analysis.—In connection with laboratory course *b*.
1 unit, either semester (LENOX) T 1:05

7. Advanced Organic Chemistry.—Advanced topics in organic chemistry, including stereochemistry. Open to students who have completed courses 2 and 3. [Given in alternate years.]
2 units, 1st semester (FRANKLIN) [Not given in 1916-17.]

8. General Physical Chemistry.—Lectures covering as far as possible the whole field of physical chemistry. Open to students who have completed courses 2 and *d* in Chemistry, courses 3 and 9 in Mathematics, and course 1 in Physics (course 2 being also recommended).
5 units, 1st semester (YOUNG) MTWThF 8

9. Physical-Chemical Measurements.—An informal course of lectures given as needed in connection with course *f*.
No credit (YOUNG) By arrangement

10. Applied Physical Chemistry.—For students in Analytical Chemistry and Metallurgy.
2 units, 2d semester (YOUNG) [Not given in 1916-17.]

11. Physiological Chemistry.—Lectures on the chemical composition and action of the tissues and secretions of the animal body, the digestion of foods, and the elimination of waste products. Open to students who have completed course 3.
3 units, 1st semester (SWAIN) MWF 11

12. Seminary in Chemistry.—Discussion of assigned topics in theoretical and general chemistry. Open to graduate students, and to advanced undergraduates in Chemistry, with the approval of the Faculty in Chemistry.

1 unit, both semesters W 4-5

13. Chemical Calculations.—Consists of a series of problems designed to review the fundamental principles of analytical and theoretical chemistry. Open to juniors and seniors who have had courses 2 and *d*. A series of more advanced problems will be given by arrangement.

2 units, 2d semester (MITCHELL) W 8

II. LABORATORY COURSES

a. General Inorganic Chemistry.—In connection with course 1.

*a*I. Illustrating fundamental laws and principles of elementary chemistry, for students who have not received entrance credit in Chemistry.

2 units, 1st semester (MITCHELL, BOHART) MT or ThF 1:05-4:05

*a*II. Inorganic preparations and general chemistry. For students who either have completed *a*I or have received entrance credit in Chemistry.

2 units, either semester (MITCHELL, BOHART) MT or ThF 1:05-4:05

b. Qualitative Analysis.—Open to students who have completed courses 1 and *a*II.

3 afternoons, either semester (LENOX, BERGER) By arrangement

c. Preparation of Typical Carbon Cmpounds.—Open in connection with course 3 to students who have completed course *b*.

3 afternoons, either semester (FRANKLIN) By arrangement

d. Quantitative Analysis.—Training in manipulation in gravimetric and volumetric methods. Work begins either semester. Students in other departments than Chemistry may register for three afternoons if they cannot arrange for four, as is recommended. Open to students who have completed courses 6 and *b*.

4 afternoons, either semester (SLOAN) By arrangement

e. Mineral Analysis.—Systematic analysis of representative minerals. Open to students who have completed course *d*, and required of students whose major subject is Chemistry, unless *f* or *g* be elected instead.

4 afternoons, either semester (LENOX, SLOAN) By arrangement

f. Physical-Chemical Measurements.—Exercises in the practice of physical-chemical laboratory methods. Open to students who have completed or are taking course 8, and who have completed course *d*.

3 or 5 units, either semester (YOUNG) By arrangement

g. Physiological Chemistry.—A laboratory course including a preliminary study of the proteins, carbohydrates, and fats, and the action of the various digestive fluids upon them, followed by a chemical examination of the bile, blood, milk, the chief tissues of the animal body, and the excretions. In connection with course 11.

3 afternoons, 1st semester (SWAIN) By arrangement

h. Volumetric Assaying Methods.—Open to students who have completed course *d*.

2 afternoons, 1st semester (LENOX)
Lab. by arrangement; Lec. Th 1:05

i. Physical-Chemical Laboratory.—A course recommended in connection with Chemistry 10.

(YOUNG) By arrangement

k. Analytical Chemistry.—A condensed course intended exclusively for students preparing for medicine. Not open to Chemistry majors, and not accepted in place of the regular courses in qualitative and quantitative analysis as prerequisites for advanced laboratory courses, with the exception of physiological chemistry for medical students.

[Students preparing for Medicine who have, however, already completed the regular course in Qualitative Analysis (6 and *b*), may register for *kb* for two hours' credit.]

In 1916-17 the course *kb* must be begun by October 20th in the first semester and about March 1st in the second semester. The classes will be expected to finish *ka* by those dates. Course *k* (*a* and *b*) must be registered at the same time—for four units total credit. Either semester.

ka. Qualitative Analysis.—Brief course. Credit deferred until *kb* is also completed.

2 units (LENOX, BERGER)

kb. Quantitative Analysis.—Brief course.

2 units (SLOAN)

x. **Advanced and Special Courses** in laboratory work and research work are open to students who have completed the necessary prerequisites, by arrangement with professors of the Department, and with reference to the particular aims and ambitions of the students. Such advanced or special subjects are, for example: special methods in mineral analysis, iron and steel analysis; special methods in assaying; water analysis; food analysis; urine analysis; elementary organic analysis; special organic preparations; analysis of sugar, toxicology, etc.

Qualified students may also pursue investigations of problems in inorganic, organic, physical, analytical, or physiological chemistry under the direction of any professor with whom arrangement is made.

For all such advanced, special, or research work, students will register and enroll under *x*, giving name of the professor under whom the work is to be carried on, and for such number of units of credit as may be agreed upon.

Candidates for the degree of Bachelor of Arts in Chemistry may select any one of the four following curricula (A, B, C, D), the requirements of the Department being as follows:

A. GENERAL CHEMISTRY

FIRST YEAR:—Chemistry 1, *a;* Physics 1; Mathematics 3; German 1.
SECOND YEAR:—Chemistry 2, 6, *b;* Mathematics 7 or 9; German 2*a* or 2*c*.
THIRD AND FOURTH YEARS:—Chemistry *d,* 3, *c,* 8, *f;* Mineralogy 2.

Recommended for all who are studying the science of chemistry for its own sake or for the profession of teaching.

B. ANALYTICAL CHEMISTRY

FIRST YEAR:—Chemistry 1, *a;* Physics 1; German 1.
SECOND YEAR:—Chemistry 2, 6, *b;* Geology 1; Economic Geology 1; German 2*a* or 2*c*.
THIRD AND FOURTH YEARS:—Chemistry *d, e, c, h,* 3, 10; Mineralogy 1; Metallurgy *a*.

Particularly adapted to students who are looking forward to the career of analytical chemist and assayer.

C. MEDICAL OR SANITARY CHEMISTRY

FIRST YEAR:—Chemistry 1, *a;* Physiology 1; German 1.
SECOND YEAR:—Chemistry 2, 6, *b;* Physics 7; German 2*a* or 2*c*.
THIRD AND FOURTH YEARS:—Chemistry 3, *c, d,* 11, *g*.

Particularly adapted to students who are looking forward to medical education or to sanitary chemistry.

D. CHEMICAL ENGINEERING

This curriculum comprises four years of the necessary five years' work leading to the advanced degree of *Engineer* in Chemical Engineering. Candidates in this course receive the degree of A. B. in Chemistry upon completion of the following requirements:
FIRST YEAR:—Chemistry 1, *a;* Applied Mathematics 1; German 1.

SECOND YEAR:—Chemistry 2, 6, *b, d;* Applied Mathematics 2, 3.
THIRD YEAR:—Chemistry 3, *c;* Engineering 1*a*, 1*b*, 2; Physics 1, 2 (or 6*a* and 6*b*); German 2*a* or 2*c*.
FOURTH YEAR:—Chemistry 4, *e* (or *h*); Mechanical Engineering 12, 13; Metallurgy 1; Engineering 3*a*.

Intended particularly for students who are working toward the degree of Chemical Engineer and who desire to fit themselves for positions of responsibility in connection with the administration of industries involving chemical knowledge and skill.

ADVANCED DEGREES

Applicants for the degree of MASTER OF ARTS in Chemistry will be expected to complete, in addition to the requirements for the bachelor's degree, the equivalent of thirty units' work in the University—of which approximately two-thirds must be in the Department. This work will include a thesis based on laboratory work, and Chemistry 8 and *f*, if not included in the undergraduate work.

Candidates for the advanced degree of ENGINEER in Chemical Engineering will be required to complete, in addition to the requirements for the A. B. degree specified under course D: Mechanical Engineering 14, 32, 27, 36, Chemistry 8, and a thesis based on laboratory work. Electrical Engineering 1 is advised, if possible, though not required. It is estimated that these requirements may be completed in one year after the completion of the requirements under Course D.

Candidates for the degree of DOCTOR OF PHILOSOPHY in Chemistry, after the completion of the equivalent of the requirements for Master of Arts or Engineer, will follow such courses as are approved by the Department faculty, subject to general University regulations.

The TEACHER'S RECOMMENDATION.—The minimum requirement for the high school teacher's recommendation in Chemistry is courses 1 and *a* (Elementary and General Inorganic, lectures and laboratory), the first half of course 2 (Principles of Chemistry), and either the second half of course 2, or courses 6 and *b* (Qualitative Analysis, lectures and laboratory).

LABORATORY FEES.—A charge of $25 per semester will be made to students in each laboratory course of not more than four units registration. Of this charge $10 per semester is returnable, less bills for breakage and loss of apparatus. A charge of $15 will be made for Chemistry *h*, $5 returnable, less breakage.

ECONOMICS

AND POLITICAL SCIENCE

MURRAY SHIPLEY WILDMAN, ALBERT CONSER WHITAKER, ALVIN SAUNDERS JOHNSON, Professors.

DONALD FREDERICK GRASS, STEPHEN IVAN MILLER, JR., VICTOR J. WEST, FREDERICK BENJAMIN GARVER, Assistant Professors.

WILFRED ELDRED, MARGARET MULFORD LOTHROP, Instructors.

YAMATO ICHIHASHI, GEORGE ARCHIBALD CLARK, JESSICA B. PEIXOTTO, Lecturers.

ALBERT JOHN HETTINGER, Assistant in Instruction.

GRADUATION.—To obtain recommendation for the degree of Bachelor of Arts in Economics and Political Science a student is expected to secure credit for a minimum of 30 units in this department. Of these, 9 units should be listed as advanced courses.

In addition to the work in this department candidates are expected to secure credit for about 40 units of specified courses in other departments. These courses should be chosen in consultation with the department adviser, and completed during the first two years in so far as possible.

TEACHER'S RECOMMENDATION.—To obtain a teacher's recommendation in Economics or Political Science or both a student must have completed courses 1 and 2 or their equivalent, together with 10 units additional in this department.

JOURNALISM.—Students, majors in this department, who desire to prepare for journalism are referred to page 152.

Course 1 (or 1*b*) is the only Economics course open to first-year students and is prerequisite to every other course except when otherwise specified in the description of the course. Likewise course 2 is the only course in Political Science open to first-year students and is prerequisite to all others in that subject. Both these courses are required of all candidates for graduation who have made this their major department.

ELEMENTARY AND GENERAL COURSES

1. Elements of Economics.—A general and introductory course. One lecture hour and two quiz hours each week. Majors of other departments, when juniors or seniors, may register for two units credit, omitting the lecture if necessary.

3 units, both semesters (WILDMAN, MILLER, GARVER, ELDRED)
MWF 9

1b. Elements of Economics.—Covering the same ground as course 1 to accommodate students entering at mid-year. Not open for credit to those who have had credit in course 1.
5 units, 2d semester (WILDMAN) MTWF 11 and S 8

2. Introduction to Political Science.—An introductory study of the origin and nature of the state, forms of government, theories of state functions, citizenship, and political parties. A general course open to all students. This course or its equivalent is prerequisite for all other political science courses, and is required for majors.
3 units, 1st semester (WEST) TThS 8

3. Elementary Accounting.—Development of accounting; theory of debit and credit; bookkeeping forms and practice; preparation of balance sheets and their interpretation; application of theory and principle to simple systems of accounts; practical accounting problems. Should be taken by students expecting to enter courses 20, 33, and 55.
3 units, 1st semester. (GRASS) MWF 9

4. Money and Banking.—The elements of monetary theory; the laws of coinage, legal tender, and credit; the standard of value, price movements and their relation to prosperity; the banking systems of the United States and of California.
4 units, 1st semester (WILDMAN) TWThF 9

5. Elements of Railway Transportation.—This course will cover the main problems of railways in the light of economic principles, and their wider significance to industry and society; the present American railway system and its development; railway finance, theories of rates, and methods of public control.
3 units, 1st semester (MILLER) MWF 8

6. Introduction to Statistics.—A study of elementary statistical methods, based upon economic and social data, including statistics of population, commerce, and finance. An attempt will be made to apply statistical methods to business problems as well as to those of economics in the broader sense.
3 units, 1st semester (ELDRED) MWF 11

7. Financial History of the United States.—A general historical survey of the financial policy of the national government with especial emphasis on the Revolutionary, Civil War, and recent periods. The subject matter of the course includes the tariff, the internal revenue system, the public land policy, the growth of public expenditures, management of the public debt, and treasury administration. Open to all students who have had or are taking Economics I.

2 units, 2d semester (GARVER) TTh 10

8. Resources and Trade of the United States.—An analysis of the economic resources of the United States, and a study of the methods used in marketing staple products, notably the raw materials of commerce, with some attention to organized speculation and to the problems of conservation and public control.

3 units, 1st semester (ELDRED) MWF 8

9. State and Local Government.—Township, county, and state government in the United States, with special attention to California. Prerequisite, course 2.

3 units, 2d semester (WEST) TThS 8

10. Bond Values and Capitalization.—A problem course in the application of the rate of interest to the valuation of income-bearing property; future sum and present worth; the rate of discount and rate of interest; simple and compound interest; the present worth of commercial paper; the capitalized value of annuities; the valuation of bonds and shares on the basis of a given rate of interest; the construction and use of bond value tables; accrued interest; the nature of depreciation; depreciation funds in theory and practice; sinking funds; the principles of capitalized value applied to mines, forests, industrial plants, franchises, inventions, etc. The student's work will consist largely in the solution of assigned problems. No advanced mathematics required, and majors of other departments will be admitted without prerequisites. This course is a prerequisite to 20, Corporation Finance, and 60, Valuation.

4 units, 1st semester (WHITAKER) MTWTh 10

INTERMEDIATE COURSES

20. Corporation Finance.—Elementary survey of corporation law; the organization and management of corporations; the corporation's securities, stocks and bonds and their classification; the stock market and stock speculation; capitalization, surplus, reserve, and financial policy; the provision of new capital; promotion, underwriting, receiverships and reorganization. Prerequisite, course 10.

4 units, 2d semester (WHITAKER) MTWTh 10

21. Public Finance.—A general course dealing with the principles involved in the conduct of government finances. The major part of the course is occupied with the subject of taxation, including the national,

state, and local systems, but the subjects of public debts, public expenditures, the budget, and financial administration are also discussed.
3 units, 1st semester (Garver) MWF 10

22. Labor Problems.—A study of the more important phases of trade unionism in England and the United States, including a history of the labor movement and a discussion of strikes, lockouts, boycotts, the blacklist, the closed shop policy, and allied questions.
3 units, 2d semester (Garver) MWF 10

23a. Social Agencies.—A general survey of the leading economic, social, and individual causes of poverty, and a study of the methods and principles of modern relief.
3 units, 1st semester (Lothrop) TThS 9

23b. Social Agencies.—The causes of crime; proposed remedies; treatment of the criminal; the prevention of crime; juvenile delinquency.
3 units, 2d semester (Lothrop) TThS 9

24. The Household as an Economic Agent.—The theory and practice of spending, with special reference to household budgets.
2 units, 1st semester (Peixotto) Th 3-5

25. Marketing.—A study of the commercial organization of the United States and an analysis of methods of marketing farm produce and manufactured articles. Attention will be given to co-operative methods, notably as developed in California, and to the recent changes which have occurred in the field of retail distribution, the growth of department stores, chain stores, mail order houses. Some time will be given to a discussion of the principles and methods of advertising.
3 units, 2d semester (Eldred) MWF 8

26. The Foreign Exchanges.—A study of the system of settling international indebtedness; principles and practice of exchange banking; money markets of the world and their relations. Domestic exchange will also be considered. Prerequisite, course 4.
4 units, 1st semester (Whitaker) MTWTh 8

27. Life Insurance.—General principles of insurance; their development and application to modern business; organization, forms, and technique of life insurance; industrial insurance; problems of state control.
2 units, 1st semester (Grass) TTh 9

28. Property Insurance.—Theory of risk and application to modern business; organization, forms, and technique of fire and marine insurance; miscellaneous forms of property insurance.
[Not given in 1916-17.]

30. Water Transportation.—A study of the development and the significance of American and European internal waterways; ocean transportation; the Panama Canal and the relation of water transportation to railways. Prerequisite, course 5.
2 units, 1st semester (MILLER) TTh 8

33. Business Administration.—An introductory study of the growth and development of the business unit; the methods employed in modern industrial and commercial enterprises; the organization and correlation of departments; psychology of selling and buying; promotion of efficiency and co-operation in the personnel.
3 units, 2d semester (GRASS) MWF 9

34. Comparative Federal Government.—An inquiry into the operation of the federal principle in the United States, Germany, and the British federated colonies—Canada, Australia, and South Africa. Prerequisite, course 2.
3 units, 1st semester (WEST) MWF 8

35. Parliamentary Government.—A study of the governments of England and France. Prerequisite, course 34.
3 units, 2d semester (JOHNSON) MWF 9

36. Municipal Government.—Analytic and comparative study of city government in Europe and America; relation of the city to the central government; organization of city government and special problems of administration.
2 units, both semesters (WEST) TTh 10

37. Colonial Government.—The systems of government of colonies and dependencies employed by England, Germany, France, Holland, and the United States. Prerequisites, courses 34, 35.
[Not given in 1916-17.]

38. American Methods of Taxation.—An examination of some of the more important taxes levied by the national and state governments. A detailed and practical study will be made of income, corporation, railroad, bank, insurance, and land taxes. The organization and methods of the leading state tax commissions will also be considered. Prerequisite, courses 8 and 21.
3 units, 2d semester (GARVER) [Not given in 1916-17.]

ADVANCED AND GRADUATE COURSES

[The courses which follow are not open to any students with less than 55 units of university credit.]

50. Railway Rates and Regulation.—A study of rates in theory and practice; problems of freight classification and routing; distance and commodity tariffs; personal and local discriminations; the growth of state and federal regulation and a survey of important commission and court decisions. To be preceded by course 5.
3 units, 2d semester (MILLER) MWF 8

51. Secretarial Training.—Offering in the first semester the fundamental training of a stenographer, in the second, practical work in connection with the common range of secretarial problems, so far as possible carried out under actual office conditions. Open only to junior and senior students who expect to enter upon a business career. [Also listed under Education.]
3 units, both semesters (CLARK) MTWF 11

52. Banking Problems.—The organization of American credit institutions under the Federal Reserve Act, and a comparison between American and European practice. [Given in alternate years.]
2 units, 2d semester (WILDMAN) TTh 9

53. Population.—The purpose of this course is threefold: (1) A historical survey of the phenomena of population in the leading countries, (2) an examination of theories of population, and (3) an attempt to determine the position of population as an economic factor. Students intending to take course 54 are advised to take this course as preparatory to it.
3 units, 1st semester (ICHIHASHI) MWF 10

54. Immigration and the Race Problem.—A study of immigration as a phenomenon of population, and the social and economic significance of the ethnic composition as affected by it, with special reference to the United States.
3 units, 2d semester (ICHIHASHI) MWF 10

55. Advanced Accounting.—A study of more specialized systems of accounts; cost accounting; auditing; accounting problems. Prerequisites, Economics 3 and 33. [Given in alternate years.]
2 units, 2d semester (GRASS) TTh 9

56. Municipal Accounting.—Forms and practice of municipal accounts; preparation of the budget and reports; public utilities accounting. Prerequisite, Economics 13. [Given in alternate years.]
[Not given in 1916-17.]

57. Government in Its Relation to Industry.—A study of political problems as affected by the changes in business organization since the industrial revolution. The "laissez faire" *versus* the "general welfare" concept of government. Measures needed to make the general welfare concept effective.
2 units, both semesters (JOHNSON) TTh 10

59. Combinations and Trusts.—The forms and methods of industrial pools and combinations or "trusts," and the problem of public control. The course deals largely with the Federal Anti-trust Legislation and its construction by the courts. Prerequisite, course 20.
2 units, 2d semester (WHITAKER) TTh 8

60. Valuation.—The valuation of the properties of public service companies for the purposes of the regulation of rates, with an introductory study of relevant parts of the theory of value and of interest. Prerequisite, courses 10 and 20.
2 units, 2d semester (WHITAKER) MW 8

61. Value and Distribution.—A study of the factors which determine the values of economic goods, and of those which determine the "shares in the distribution of wealth." Prerequisite, 12 units of economics and senior standing, or the permission of the instructor.
3 units, both semesters (GARVER) MWF 8

62. Socialism.—A discussion of the history and fundamental principles of Socialism and allied movements. For seniors and graduates.
3 units, 2d semester [Not given in 1916-17.]

63a. History of Political Economy.—A brief survey of economic writers and literature of Europe down to 1850. The development of economic thought in its environment will be studied.
2 units, 1st semester (GRASS) MW 11

63b. History of Economic Thought in the United States.—A brief survey of economic writers and literature of America, and a comparison with contemporary writers in Europe.
2 units, 2d semester (GRASS) MW 11

64. Political Parties.—Development of nominating machinery and political issues in the United States, analysis of party organization, consideration of party activities and reform movements, and inquiry into the true functions of parties.

3 units, 2d semester (WEST) [Not given in 1916-17.]

65. American Politics.—An examination of the American system with reference to the extent and effectiveness of popular control, special attention being given to the problems connected with elections and legislation.

3 units, 1st semester (JOHNSON) MWF 10

66. Seminar in Taxation.—In 1916-17 the subject for investigation will be income taxes. Open only to seniors and graduate students who have had courses 21 and 50.

2 units, 1st semester (GARVER) By arrangement

67. Seminar in American Industrial Development since 1840.—Attention will be given to railroad and shipping development, agriculture, mining, and the growth of the West, the evolution of selected industries, from the point of view of technical improvement and industrial and commercial organization; also commercial crises, and the development of methods of commercial distribution.

2 units, 2d semester (ELDRED) By arrangement

68a. Seminar in Political Science.—Special problems in government. Open to seniors and graduate students. Topics and hours to be arranged.

2 or 3 units, both semesters (JOHNSON) By arrangement

68b. Seminar in Municipal Problems.—Topic for 1916-17: Police Administration. Open only to graduate students and to seniors with 30 units in the department, including course 36. Recommended: Law 10.

2 units, 2d semester (WEST) By arrangement

69. Seminar in Railroad Administration.—This seminar is designed for advanced students expecting to enter railway work as a vocation.

2 units, 2d semester (MILLER) By arrangement

70. Graduate Seminar.—Open only to candidates for higher degrees and members of the department.

2 units, both semesters (WILDMAN) By arrangement

EDUCATION

Ellwood Patterson Cubberley, Lewis Madison Terman, Professors.
Percy Erwin Davidson, †Rufus Clarence Bentley, Associate Professors.
Jesse Brundage Sears, Assistant Professor.
Morris Elmer Dailey, George Archibald Clark, Lecturers.
Samuel C. Kohs, Research Fellow on the Buckel Foundation.
William Martin Proctor, Arthur Sinton Otis, Assistants in Instruction.

Graphic Art

Arthur Bridgman Clark, Professor.
Chloe Lesley Starks, Instructor.

The Department of Education offers five main lines of work:

1. Courses of a general nature on the history, function, and administration of public education, intended in part as information courses for the general university student and without reference to the work of teaching. To such students the courses of Groups I and II are recommended.

2. Courses intended to assist other departments in preparing their students for work in secondary schools. All such students should confer with members of the Department of Education as to courses, but in general courses 1, 2, 20, and 24 are recommended, if the candidate has not had experience in teaching. Three units of work in courses relating to secondary-school work are required under the regulations of the California State Board of Education for the high school teacher's recommendation, as are courses 25 and 26, if the candidate has not had previous experience in teaching. (For a more detailed statement, see *Register,* pp. 85-88.)

3. Courses primarily for major students, or those making Education a minor, and intended to give special preparation to (*a*) those who desire to become teachers of Education in normal schools or colleges, (*b*) those who wish to prepare for supervisory or administrative positions in the public schools, elementary or secondary, and (*c*) those who wish to prepare for special educational work in the elementary or secondary field.

4. Courses and research work in the psychology and pedagogy of exceptional children. Two lines of work are offered in this field: (*a*)

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†Absent on leave, 1916-17.

elementary courses designed to give prospective superintendents and principals a general acquaintance with the problems of special education, and (*b*) research courses for the advanced student who looks forward to work as clinical psychologist in the public schools or in institutions for defectives or delinquents. The Dr. C. Annette Buckel Foundation, supplemented by additional support from the Board of Trustees of the University, has provided for a "research fellowship in the psychology and pedagogy of backward children."

5. Courses for the preparation of teachers of drawing for the public schools, and for the general training of college students in artistic perception and graphic expression. (See division of Graphic Art.)

The courses in Education are open to all students as electives or as minor subjects, but only those who desire to prepare for one of the lines of work mentioned above under (3) or (4), and whose preparation and experience are satisfactory to the Department, will be accepted as major students. In special cases those without teaching experience may be accepted as major students, but all such must register for courses 25 and 26 as soon thereafter as arrangements can be made.

Major Requirements

Major students begin their work in Education with the sophomore year, taking courses 1 and 2. Psychology 1 and 2*a* should also be taken this same year. Physiology 1, Zoology 1, or Botany 1, the course in Bionomics, and Economics 1, should also be taken early in the student's course. Other collateral work will be advised to meet individual needs, as determined by the programme of study the student wishes to follow. The requirements of the different programmes will be supplied on application. For students in the division of Graphic Art, 15 units of work in Education will be required. Students coming with advanced or graduate standing from other universities, where the curriculum does not parallel that offered here, may have substantially equivalent preparation or experience accepted in lieu of the courses required here.

The requirements for the baccalaureate degree cover only introductions to the different fields of Education, and it is assumed that those proposing to offer themselves for responsible positions in educational work, such as those indicated under 3, above, will proceed at once to the Master's degree. For this at least twenty units in advance of the baccalaureate requirements, together with the presentation of a satisfactory thesis, will be required. Work in Group I will not be included, and ordinarily one-half of the twenty units must be work listed under

Group IV. The completion of the first year of graduate study should mean a somewhat general acquaintance with the different divisions of Education, together with the beginnings of specialization in some one of these. Those who desire to prepare for the type of positions indicated under 4, should proceed to the doctorate.

During the second year of graduate study the student will be expected to attain a mastery of the literature and practice in two of the following divisions of the subject: (1) History of Education, (2) Theory of Education, (3) Administration of Education, (4) Educational Psychology, (5) Educational Hygiene. Students intending to proceed to the doctorate, either at once or later, should select one of these divisions as a major and one as a minor; complete in large part the required work in a second minor, outside of the Department; pass off the modern language requirements; and get well started on the dissertation.

Library and Practical Facilities

The general university library contains the important recent books, and files of the more important educational magazines, both American and foreign. The collection of early American educational magazines and reports is also good. The special library of the Department, consisting of about 7500 volumes, contains one of the most complete collections of American state and city school reports to be found in the United States, the library ranking probably third in this respect. It is also rich in old college and normal school catalogues and text-books, of much historical value. The collection of old and present-day school text-books is also large and valuable.

In practical facilities the department has good working connections with the State Normal School at San Jose, and with the public schools of the immediate vicinity. For more important studies by advanced students the large school systems in the vicinity of the University can be used, and a kindergarten class and a class of retarded pupils are available for careful systematic instruction and study.

The department is also provided with a research laboratory for use in connection with the Buckel Foundation. This is well equipped with the apparatus, blanks, and other materials used in mental and physical tests.

I. Elementary and Introductory Courses

[Open to any one with teaching experience, and to all others except first-year students.]

1. **Public Education in America.**—A study of the development, province, and some of the more important problems of public educa-

tion in the United States. An introductory course. Lectures, following a syllabus, with assigned readings.
2 units, 1st semester (CUBBERLEY) TTh 10

2. Educational Theory.—An introductory course dealing with topics fundamental to education, such as biological infancy, human endowment and culture, education and the social order, individual differences, types of learning, the order of growth, character, etc. Lectures, following a syllabus, with assigned readings.
2 units, 2d semester (DAVIDSON) TTh 10

3. History of Education in Europe.—A study of the development of educational ideals and systems from the time of the Greeks to the present. Following a rapid survey of the Greek, Roman, and mediaeval periods, the main emphasis will be placed upon educational developments subsequent to the Reformation and Renaissance movements.
3 units, 1st semester (SEARS) MWF 9

4. History of Education in America.—A history of American educational ideals and practices, with some emphasis upon our European antecedents and those features which are peculiarly American.
3 units, 2d semester (SEARS) MWF 9

5. Primary Education.—A study of the history and institutions of the formal education of young children; provisions in other countries; the kindergarten in America; the reforms of Montessori and others; pedagogy of the primary-school period.
3 units, 1st semester (DAVIDSON) [Not given in 1916-17.]

II. MORE ADVANCED COURSES, BUT OF A SOMEWHAT GENERAL NATURE

[Open to teachers, and to third- and fourth-year students. In general, courses 1 and 2 should precede these courses. Course 3 should precede or accompany course 31.]

11. Educational Hygiene.—The hygiene of growth; physical defects of school children; the medical inspection and health supervision of schools; the hygiene of the school plant.
2 units, 1st semester (TERMAN) TTh 11

12. Social and Moral Education.—A study of the significance for education of the psychology of character.
3 units, 1st semester (DAVIDSON) MWF 10

14. Logic of Education.—A study of the significance for education of the psychology of attention, interest, and thinking. Prerequisite: General Psychology.
3 units, 2d semester (DAVIDSON) [Not given in 1916-17.]

15a. Elementary Education.—This course will deal with the larger problems of organization and management, including such topics as grade, departmental, and individual systems of class organization; schemes of promotion; programme making; time allotment; grades and marks; records and reports; attendance; supervision; and kindred topics. For prospective principals and teachers in the elementary school.

2 units, 1st semester (SEARS) TTh 9

15b. The Elementary School Curriculum.—A study of the principles underlying organization of subject matter for courses in the elementary school, including a critical examination of curricula syllabi, and school texts in the light of their function in teaching.

2 units, 2d semester (SEARS) TTh 9

19. Exceptional Children.—A somewhat general course dealing with the frequency, causes, and consequences of mental deficiency, and with the social and educational treatment of defective, delinquent, or otherwise exceptional children. Prerequisite: General Psychology.

2 units, either semester (TERMAN, KOHS) S 10-12

III. COURSES INTENDED PRIMARILY FOR THOSE PREPARING TO TEACH IN SECONDARY SCHOOLS

[Open to juniors, seniors, and graduate students. Course 25 should precede course 26 by one semester.]

20. Secondary Education.—A consideration of the aims, purposes, and problems of secondary education and a consideration of the high school as a community social and vocational institution. Open to seniors and graduate students.

3 units, 1st semester (CUBBERLEY) MWF 11

22. Problems in Secondary Education.—Practical problems of the secondary school, such as organization, community relationships, nature and scope, curricula, vocational adaptations and additions, foreign and American secondary schools compared. Open to those who have had course 20 or experience in teaching.

3 units, 2d semester (CUBBERLEY) MWF 11

24. Adolescence.—A study of the high school pupil with special reference to the needs of students who expect to teach in secondary schools.

2 units, 2d semester (TERMAN) TTh 11

25. Method and Management of Instruction.—A practical course in class-room management and the theory of instruction. Intended as a preparatory course for those expecting to do practice teaching, and should be taken the semester preceding.

1 unit, either semester (SEARS) M 1:05

26. Practice in Teaching.—Practice in the handling of classes and the giving of instruction, with accompanying conferences, as required by the rules of the State Board of Education for a California High School Teacher's Certificate. This may be arranged for at the University, at the San Jose State Normal School, or at any other California State Normal School. Hours for teaching must be arranged in advance: (*a*) if at the University, with Professor CUBBERLEY; (*b*) if at the San Jose State Normal School, with President DAILEY. Conference with all practice teachers.

4 units, either semester (PROCTOR, DAILEY) M 4:05-5:05

IV. ADVANCED AND SPECIAL COURSES

[Intended primarily for teachers of some experience, and for students making Education a major or a minor. Open to such, of junior standing or above.]

28. Educational Theory, Advanced Course.—A consideration of certain of the wider bearings of public education. Topic for the semester: Education and modern social problems. Open to third- and fourth-year students after consultation.

3 units, both semesters (DAVIDSON) 1st semester MWF 11;
2d semester TThS 9

29. Educational Problems.—A discussion club. Open on invitation.

1 unit, each semester (CUBBERLEY, TERMAN) Alt. W 7:30-9:30

30. Educational Psychology.—Original endowment; general mental growth; development of the special mental functions; individual differences in relation to heredity, sex, and environment; the psychology of learning; formal discipline; work and fatigue. Prerequisites: General and Experimental Psychology or their equivalents.

3 units, both semesters (TERMAN) MWF 11

31. Sources for the History of Education.—A more extensive and intensive study of the sources for the History of Education than is undertaken in connection with courses 3 or 4. Systematic readings, intended primarily to prepare for the teaching of the subject.

2 units, 2d semester (CUBBERLEY) [Not given in 1916-17.]

32. State School Administration.—A study of the educational principles underlying the proper administration of school systems in states and counties, and involving a comparative study of the school laws and school systems of the various American states. The course includes a study of such topics as federal and state policy, forms of control, revenue and its apportionment, the state and the teacher, the state and the child, private and sectarian education, and state oversight and control.

3 units, 1st semester (CUBBERLEY) MWF 10

33. City School Administration.—A study of the educational, financial, and administrative principles underlying the proper administration of school systems in cities, with a view to the establishment of principles of action. A thesis on some problem in city school organization or administration required the first semester, and a survey of a city school system required the second semester.

3 units, 2d semester (CUBBERLEY) MWF 10

34. School Administration Practice.—A laboratory course in school administration practice, dealing with the office and supervisory work of principals of elementary schools and superintendents of schools.

2 units, 2d semester (CUBBERLEY) [Not given in 1916-17.]

35. Rural Education.—A course dealing with the social and economic factors in the development of rural institutional life; how these explain the present status of the larger administrative and supervisory problems of rural education; and the principles and practical methods essential to their solution. As a part of the work of this course each student will be expected to complete an educational survey of an assigned county, or rural section. Open to advanced students in educational administration.

2 units, both semesters (SEARS) T 2:05-4:05

36. Foreign School Systems.—A comparative study of the more important foreign state school systems, their policy of organization, ideals of work, methods of instruction, training of teachers, courses of study, statistics, and recent reforms. Different national systems will be studied each year.

2 units, both semesters (———) [Not given in 1916-17.]

37. Criticism and Supervision of Instruction.—A few advanced students, who have had sufficient teaching experience, will be allowed to undertake the personal investigation, in the schools of the vicinity, of problems in instruction or supervision. Collateral reading and detailed written reports will be required. Enrollment only after conference with the instructor concerned.

1 unit, either semester (DAVIDSON, SEARS)

38. Experimental Pedagogy.—The work of the first semester will consist of a systematic introduction to the use of educational statistics

following a text. The second semester will be devoted to a survey of the investigations bearing upon the pedagogy of the elementary school subjects. Prerequisite: Elementary education (or teaching experience), and General and Experimental Psychology or their equivalents.
3 units, both semesters (DAVIDSON, OTIS) TTh 3:05-5:05

39. **Intelligence Tests and the Psychology of Endowment.**—The first semester will be devoted to a critical survey of the literature of mental tests, with special reference to the psychological principles of measuring intelligence. During the second semester practice will be given in mental testing and the treatment of data. Prerequisite: General and Experimental Psychology, and Education 30 or its equivalent.
3 units, both semesters (TERMAN) TTh 1:05

40. **Thesis Work.**—In certain courses, students may be given an additional hour of credit on presentation of a satisfactory thesis on an assigned topic embodying the results of independent work. The consent of the instructor is necessary before registering.
1 unit, either semester.

41. **Special Courses.**—Special work in independent investigations may be provided for students prepared to do advanced work, the nature of the investigation being determined by the student's preparation and needs. Candidates for advanced degrees will ordinarily register their thesis under this course, the number of units of credit being subject to individual arrangement. The members of the instructing staff stand ready to supervise independent investigations in the following fields:

(*a*) History and organization of American Education, and problems in state and city school administration. (CUBBERLEY)

(*b*) Problems in educational theory and elementary instruction. (DAVIDSON)

(*c*) Problems in rural education. (SEARS)

(*d*) Problems in the organization and administration of secondary education. (CUBBERLEY)

(*e*) Problems in mental development, educational psychology, and school hygiene. (TERMAN)

V. COURSES FOR TEACHERS OF SPECIAL SUBJECTS

The following special courses of instruction, and groupings of courses, designed to prepare teachers for special work in the public schools, are open as electives to majors in other departments, or may be taken in conjunction with a major in Education.

1. Commercial Teachers' Training Course

A. Commercial Teachers' Training Course.—A demonstration course in the teaching of shorthand and typewriting, supplemented by discussions and illustrations in the treatment of English, geography, arithmetic, law, and other collateral subjects, the object being to demonstrate a working plan for handling commercial subjects in the high school. Open to junior and senior students intending to take up teaching. One hour of instruction and two hours of practice, three times weekly. [See Economics 51.]

3 units, 1st semester (CLARK) MTWF 11

2. Manual Arts Teachers' Course

This curriculum is designed to prepare teachers of the manual arts for work in polytechnic high schools. The full curriculum requires a minimum of 28 units of work, or a minimum of 22 units if preparation in Foundry Work and Pattern Making is omitted. The courses marked with the asterisk are essential.

*1. Woodworking—[Mech. Eng. 5.] 2 or 3 units, either semester.

*2. Forge Work—[Mech. Eng. 1*a* and 1*b*.] 3 units, either semester.

*3. Machine Shop Work.—[Mech. Eng. 7*a* and 7*b*.] 3 units, either semester. (Presupposes Forge Work.)

4. Foundry Work.—[Mech. Eng. 3*a* and 3*b*.] 3 units, either semester.

5. Pattern Shop Work.—[Mech. Eng. 6*a* and 6*b*.] 3 units, either semester. (Presupposes Woodworking and Foundry Work.)

*6. Freehand Drawing.—[Graphic Art.] 3 units, each semester.

*7. Linear Drawing and Lettering—[Engineering 1*b*.] 1 unit, either semester.

8. Descriptive Geometry.—[Engineering 1*b*.] 1 unit, 1st semester. (Presupposes Algebra, Geometry, and Linear Drawing and Lettering.) 4 units, 2d semester.

*9. Elementary Machine Drawing.—[Mechanical Eng. 11.] 2 or 3 units, either semester. (Presupposes Freehand Drawing, Linear Drawing and Lettering, and Descriptive Geometry.)

This course will take a part of a student's time for two years to complete. If begun in the senior year it can be completed at the same time the Teacher's Recommendation is ordinarily obtained. The best arrangement of the work will be as follows:

COURSES	1st Sem.	2d Sem.	3d Sem.	4th Sem.
*Woodworking	2-3	....	....	....
*Linear Drawing and Lettering	1	...	....	. ..
Descriptive Geometry	1	4	. ..	....
Foundry Work	3	....	....	....
Pattern Shop Work	....	3	....	....
*Freehand Drawing	....	....	3	3
*Forge Work	....	....	3	....
*Machine Shop Work	....	....	....	3
*Machine Drawing	....	....	....	2-3
Minimum units	7	7	6	8

VI. COURSES IN OTHER DEPARTMENTS

The following Teachers' Courses in other departments are designed for students preparing to teach these special subjects in secondary schools. Such courses are usually necessary for the departmental recommendation, and may be counted to the extent of three units as part of the work required in Education for a Teacher's Certificate.

a. TEACHER'S COURSE IN GREEK.—[See Department of Greek.]

b. TEACHER'S COURSE IN LATIN.—[See Department of Latin.]

c. TEACHER'S COURSE IN GERMAN.—[See Department of Germanic Languages.]

d. TEACHER'S COURSE IN FRENCH.—[See Department of Romanic Languages.]

e. TEACHER'S COURSE IN ENGLISH.—[See Department of English.]

f. TEACHER'S COURSE IN HISTORY.—[See Department of History.]

g. TEACHER'S COURSE IN DRAWING.—[See division of Graphic Art.]

h. TEACHER'S COURSE IN ELEMENTARY PHYSICS.—[See Department of Physics.]

VII. COURSES IN SANTA BARBARA AND SAN JOSE STATE NORMAL SCHOOLS

Major students in Education who desire to become teachers of Home Economics and Manual Arts may arrange to take these subjects during their junior year at the Santa Barbara or the San Jose State Normal Schools. The Sciences, Hygiene, Economics, Psychology, Education, etc., if included in the university course, will allow more hours in the State Normal for professional work and its application in practice teaching in the special subjects. The Household Economics is required, but students may elect Household Science and Household Arts, or either one, with Applied Arts—Pottery, Woodcarving, Metal Work, Weaving, etc. Further information may be obtained by writing the President of the State Normal School at Santa Barbara, and San Jose, California.

DIVISION OF GRAPHIC ART

The work aims primarily to prepare students for positions as teachers of drawing and art in secondary schools. Many of the courses are also suitable for the practical and general cultural needs of students in other departments.

Intending teachers of art should register with Education as their major subject. The art work of such students will be somewhat as follows:

FIRST YEAR.—First semester: Still-Life or Landscape, 3 units; Linear Drawing and Lettering (Engineering 1*a*), 1 unit.

Second semester: Organic Form, 3 units; Machine Drawing (Mechanical Engineering 11), 2 units.

SECOND YEAR.—First semester: Design, 3 units; Pottery, 2 units; Lectures on Painters, 2 units.

Second semester: Art in the House, 3 units; Metal Work, 2 units; Lectures on Painters, 2 units.

THIRD YEAR.—First semester: Scientific Drawing or Textiles, 2 units; Pottery or Tooled Leather, 2 units.

Second semester: Advanced Metal Work, 3 units; Perspective, 2 units.

FOURTH YEAR.—First semester: Advanced Design, 3 units. Seminar, 1 unit.

Second semester: Teachers' Course in Art, 3 units. Seminar, 1 unit.

Upon completing 120 units for graduation, including the above and fifteen units in Education, the special certificate for teaching art will be granted by the State Board of Education. Students who remain at the University for a fifth year of study following the acquirement of the A. B. degree, may take a portion of the above art work during their fifth year.

1. Still-Life.—Fundamental principles, in blocking, proportion, and light and shade; materials: charcoal and colored crayon. Open to all students.

2 to 3 units, both semesters (STARKS) (1st sem.) WThF 1:05-4:05;
(2d sem.) MTWThF 1:05-4:05

2. Landscape.—Working out-of-doors in pencil, charcoal, and colored crayon. Open to all students having had the equivalent of course 1.
3 units, 1st semester (STARKS) MTW 1:05-4:05

3. Organic Form.—Drawing shells, leaf sprays, animal forms, etc., with reference to discipline in accuracy, and the perception of decorative arrangement. Preparation for course 4. Open to all students.
2 to 3 units, 2d semester (STARKS) MTW 1:05-4:05

4. Design.—Exercises in the principles of space filling, borders, squares, surface patterns, etc. Intended to accompany applied design and execution of work in handicrafts, pottery, leather tooling, metal work, and textiles. Course 3 or its equivalent a prerequisite.
3 units, 1st semester (CLARK) MTW 1:05-4:05

5. Art in the House.—A study of taste, convenience, and economy in house designing and furnishing; types of exteriors, arrangement of grounds, plans, textiles and furniture, expense lists for different grades of income. (Given in even numbered years only.) Open to students who have had three units of technical work.
3 units, 2d semester (CLARK) [Not given in 1916-17]

6. Lectures on Painters.—First semester, Masters of the Renaissance from Giotto to Velasquez. Second semester, Painters of the nineteenth century and of the present time. Open to all students.
2 units, either or both semesters (CLARK) TTh 10

7. Handicrafts.—(*a*) *Pottery,* modeling, casting, glazing and firing faience. Open to students who have had three units of technical work in drawing or design.
2 to 3 units, 1st semester (CLARK) WThF 1:05-4:05

(*b*) *Metal Work,* making trays, bowls, book supports, etc., in sheet copper; jewelry in silver and semi-precious stones. Open to students who have had three units of technical work in drawing or design.
2 to 3 units, 2d semester (CLARK) WThF 1:05-4:05

(*c*) *Tooled Leather,* mats, card cases, etc. This work may be substituted in part for work in pottery or metal work.

(*d*) *Textiles.* The use of textiles in the various hangings and other articles of interior furnishing. Stenciling, block printing, and embroidering. Open to students who have had three units of technical work in design.
2 units, 1st semester (STARKS) ThF 1:05-4:05

8. Scientific Perspective.—A series of problems involving the mathematical principles of perspective and shades and shadows, and the application of these principles in drawing actual buildings and other objects. (Given in odd numbered years only.)
2 to 3 units, 2d semester (CLARK) TS 11

9. Science Drawing.—A course designed to assist students in scientific illustration. It includes the drawing of simple scientific subjects in pen outline, line and stipple shading, wash, line and wash, Pencil and pen landscape for Geology students. Especial attention is paid to the needs of individual students. Open to science students on advice.
2 units, either semester (STARKS) TTh 9-12

10. Teachers' Course.—For intending teachers and supervisors of art. Consisting of lectures upon methods and aims in school curricula and in the practical work of preparing courses of study. Open to advanced students. (Given in odd numbered years only.)
3 units, 2d semester (CLARK) TTh 9

11. Seminar.—Discussion of current literature and special topics in art education. Open to seniors and graduate students only.
1 unit, both semesters (CLARK, STARKS) T 4:05

ENGINEERING

A. ENTRANCE SUBJECTS

Entering students whose major work is to be in any engineering department should be thoroughly prepared in elementary mathematics, and should have entrance credit in algebra (at least one and one-half units), plane and solid geometry, and plane trigonometry, in order to be able to take the first year's work in Applied Mathematics for engineers.

B. GENERAL COURSES

I. APPLIED MATHEMATICS

FIRST YEAR—Course 1 in Applied Mathematics.
SECOND YEAR—Courses 2 and 3 in Applied Mathematics. (See announcement of Department of Applied Mathematics, pp. 93-97.)

II. GENERAL TECHNICAL COURSES

1a. Linear Drawing and Lettering.—(Drafting one afternoon a week, either semester.) Open to all students, and required of those whose major subject is in any of the engineering departments, whether or not they have received entrance credit in mechanical drawing. This requirement is waived, however, for a student who satisfies the instructor that he has had the equivalent of this course, by submitting work in linear drawing and freehand lettering, or by passing a special examination. The instruments and materials for this course cost from twenty to thirty dollars.

1 unit, either semester (Foss) MT or ThF 1:05-4:05

1b. Descriptive Geometry.—Including applications to shades, shadows, and perspective. (One afternoon of drafting each week, first semester. Two lectures and two afternoons of drafting each week, second semester.) This course is open to students who have completed or who are taking Solid Geometry and Engineering 1*a*, and is required of students whose major subject is Civil or Mechanical Engineering.

1 unit, 1st semester; 4 units, 2d semester (Foss)
Lec. TTh 8, 10; Dft. MT or ThF 1:05-4:05

1c. Descriptive Geometry.—Course 1*b* abridged to meet the requirements of students having Geology and Mining as a major subject. Special preparation for problems arising in Geology. (Two afternoons of drafting each week during the first semester.) This course is open to students who have completed or who are taking Solid Geometry, and who have either had Engineering 1*a* or entrance credit in mechanical drawing.

2 units, 1st semester (Foss) MT or ThF 1:05-4:05

2. Applied Mechanics:—

a. Mechanics of Materials.—A theoretical study of the strength and elastic properties of the ordinary materials of engineering construction. The main subjects covered are simple tension, compression, and shear; flexure, with application to simple, continuous, and non-homogeneous beams; long columns; torsion; repeated stress; sudden stress and resilience. (Lectures and recitations three hours a week.)

b. Testing of Materials.—Each student is required to make a series of laboratory experiments illustrating the behavior of materials and simple structures under stress. (Laboratory work, six hours a week.)

Open to students who have completed courses 2 and 3 in Applied Mathematics; required of all students having Engineering as a major subject.

5 units, 1st semester (WING, MOSER)
Lec. MWF 9; Lab. MWF 10-12, or MT or ThF 1:05-4:05

3. Hydraulics:—

a. Theoretical Hydraulics.—This course treats of fluid pressure, the principles of fluid equilibrium, and the laws governing the flow of water through orifices, over weirs, in closed conduits, and in open channels, followed by a study of the basal theory of hydraulic turbines. Open to students who have completed courses 2 and 3 in Applied Mathematics.

5 units, 2d semester (HOSKINS) MTWThF 9

b. Experimental Hydraulics.—Including the calibration and use of instruments for the measurement of pressure, velocity, and flow of water under various conditions; the investigation of friction in pipes, bends, valves, and other obstructions, etc. Six hours per week in the laboratory on experimental work, computations, and reports. Open to students who have taken or are taking Engineering *3a*.

2 units, 2d semester (MOSER)
MT 1:05-4:05 (for C. E. majors); MWF 10-12 (for M. E. majors); ThF 1:05-4:05.

[*Note.*—See also Hydraulic courses listed under Mechanical Engineering: Testing of Hydraulic Machinery (M. E. 26); Hydraulic Power Stations (M. E. 35*b*).]

LABORATORY FEES—Courses 1*b*, 2*b*, $2 each; 1*c*, $1; 3*b*, $4.

I. CIVIL ENGINEERING

CHARLES DAVID MARX, CHARLES BENJAMIN WING, LEANDER MILLER HOSKINS, JOHN CHARLES LOUNSBURY FISH, Professors.
JOHN HARRISON FOSS, Assistant Professor.
CHARLES MOSER, Instructor.

A. TOPOGRAPHIC ENGINEERING

4a. Elementary Surveying.—Recitations: systems of co-ordinates, measurements, choice of systems, errors, checks, surveys, graphical solution of topographic problems. Field-work: experimental exercises, surveys. Drafting room: computing, mapping. (Written recitations two hours, field work and drafting nine hours, each week.) Open to students who have completed Engineering 1*a* and Plane Trigonometry. Required of students in Civil and Mining Engineering.

5 units, 1st semester (FISH)
Rec. TTh 9; Dft. M 1:05 4:05; Field ThF 1:05 4:05 (or S 9-4:05)

4b. Elementary Surveying.—For students in Mechanical and Electrical Engineering. (Field work, reading, and drafting, six hours each week.)

2 units, 1st semester (Fish)
Drafting and Field ThF 1:05-4:05 (or S 9-4:05)

4c. Advanced Surveying.—Supplementing course 4*a*. Field work, computations, drafting, and the use of references in connection with problems assigned along one or more of the following lines: land surveying (original surveys and re-surveys), latitude and azimuth, staking out structures, topographic surveying (with or without the plane table), mine surveying, hydrographic surveying, city surveying.

1 or more units, either semester (Fish) By arrangement

B. Engineering Economics

5a. Engineering Economics.—The problem of economic selection, interest, sinking funds, first cost, salvage, value and depreciation, elements of cost of service (including amortization), methods of estimating, basis of economic comparison, procedure in economic selection. (Written recitations and problems, six hours per week.)

2 units, 1st semester (Fish) Rec. TTh 11

5b. Engineering Estimates and Reports.—Each student is assigned the problem of choosing a structure for a stated service. He makes preliminary plans and estimates in connection with two or more structures proposed for the stated service, makes an economic comparison based on the estimated costs, and prepares a report on the object, conditions, methods, and result of his investigation. The object of the course is to offer training in analyzing problems of choosing structures, in the logical planning of the steps of an engineering investigation, in the execution of the steps (including use of references, of cost data, of methods of estimating, and arrangement and record of computation), and in the elements of report writing. Roughly, one-third of the time is devoted to looking up references, one-third to drawing and computing, and one-third to writing and revising the report. Open to those who have taken the preceding course, and to others by permission.

1 or more units, either semester (Fish) By arrangement

C. Railroad Engineering

6a. Railroad Surveying.—Recitations: curves and turnouts; preliminary and location surveys; earthwork. Field and office: exercises in laying out curves and taking cross-sections for topography and earthwork, and in plotting them; preliminary survey with profile and topographic map; paper location with profile and quantities; staking out paper location; earthwork surveys; final location profile and map; earthwork computations; distribution of material with use of mass diagram; overhaul computation. (Written recitations two hours, drafting and field work nine hours, each week.) Open to students who have completed 4*a*. Required of students in Civil Engineering.

5 units, 2d semester (FISH)

Rec. TTh 9; Dft. M 1:05-4:05; Field ThF 1:05-4:05

6b. Railroad Location.—Locomotive tractive force and resistances thereto, velocity profile, momentum grade. Traction problems involving inter-relation of train weight, grade, speed, and characteristics of locomotive. Value of change in distance, curvature, rise and fall, and ruling grade, based on analysis of operating expenses. Pusher grades, balanced grades for unequal traffic and for adjacent divisions. Open only to students who have completed 5*a*.

2 units, 2d semester (FISH) Rec. TTh 8

6c. Railroad Construction (Surveying and Engineering).—Field or office work assigned to individuals, according to their needs, along one or more of the following lines: supplementary work on simple, compound, and spiral curves, turnouts, connecting tracks, cross-sections, quantities, classification, and distribution. Excavating methods and plants. Situation and drainage surveys; preliminary plans and estimates; choice of structure and site; working drawings; staking out; inspection; estimates of work done. Collecting, recording, and filing information; computations and drawings; instructions and reports. A formal, written, detailed report is required on each engineering problem assigned. Open, by permission, to students who have completed 6*a* or its equivalent.

1 or more units, either semester (FISH) By arrangement

D. STRUCTURAL ENGINEERING

8a. Elements of Design:—

1. *Materials.*—[See course 1 in Metallurgy.]

2. *Mechanics of Structures.*—Course 3 in Applied Mathematics is extended to the analytical and graphical determination of stresses in simple structures.

3. *Theory of Structural Details.*—Course 2 in Engineering is extended to an investigation of the distribution of stresses in structural details.

Open to students who have completed course 1 in Engineering, and who have taken or are taking course 2 in Engineering, and also course 1 in Metallurgy. Required of all students having Civil Engineering as a major subject.

3 units, 1st semester (WING) WThF 1:05-4:05

8b. Elements of Design:—

1. *Materials.*—Structural materials, other than metals, are studied from an engineering standpoint. Wood, stone, brick, limes, cement, etc., are considered in order. (Lectures and assigned reading three hours a week first half of semester.)

2. *Foundations.*—Under this head are considered the bearing power of soils, strength of piles, distribution of pressures, and similar details connected with the design of simple foundations. (Lectures and assigned reading three hours a week, last half of semester.)

3. *Design.*—Complete designs are made, including working drawings, bill of materials, and estimate of cost, of some simple structure, such as a mill building or highway structure. (Drafting-room, nine hours a week first half of semester; six hours a week last half of semester.) Open to students who have completed course 8*a* in Civil Engineering.

4. *Testing.*—Extending the work of course 2*b* in Engineering. Each student is required to make a series of experiments, testing the physical properties of cement and other masonry materials. (Laboratory, three hours a week, last half of semester.)

Open to students who have completed course 2 in Engineering; required of all students having Civil Engineering as a major subject.

5 units, 2d semester (WING, MOSER)

Lec. MWF 8; Dft. and Lab. WThF 1:05-4:05

8c. Elements of Design.—Courses 8*a* and 8*b* abridged to meet the requirements of students having Mining, Mechanical, or Electrical Engineering as a major subject. Special applications are made to hoisting and conveying structures, mill buildings, and central station buildings. Open to students who have completed courses 1 and 2 in Engineering and course 1 in Metallurgy.

2 or 3 units, 2d semester (WING) By arrangement

9. Structural Design.—This course comprises the determination of the stresses in modern types of railroad bridges, including cantilever and swing spans, masonry arches, and arch ribs; the discussion of the most economical types, spans, and dimensions of bridges and bridge members; the study of the methods of constructing sub-aqueous foundations, shop methods, erection, inspection of material, specifications, and other factors influencing the design of structures. Designs are made by each student to fulfill actual conditions. Open to students who have completed course 8. (Lectures two hours per week, drafting nine hours.)

5 units, 1st semester; 5, 3, or 2 units, 2d semester (WING)

Lec. TTh 10 (1st sem.),T 11, Th 10 (2d sem.); Dft. WThF 1:05-4:05.

E. HYDRAULIC ENGINEERING

12. **Water-Supply Engineering for Towns and Districts.**—Sources of supply. Collecting and storing of water, either for water supply of towns or for irrigation purposes. Settling, filtering, conducting, and delivering of water, including the study and design of all accessory works. (Three hours lectures and recitations, six hours drafting.) Open to students who have completed courses 2 and 3 in Engineering and 4*a* and 8*a* in Civil Engineering; required of all students who take their major in Hydraulic Engineering.

5 units, 1st semester (MARX) Lec. MWF 10; Dft. MT 1:05-4:05

13. **Sanitary Engineering.**—Including sewerage of towns and drainage of lands. Special attention will be given to the study of all municipal sanitary problems, such as removal of sewage, destruction of garbage, construction, maintenance, sweeping, and repairs of streets and pavements. (Three hours lectures and recitations, six hours drafting.) Open to students who have completed courses 2 and 3 in Engineering and 4*a*, 8*a*, and 12 in Civil Engineering; required of all students who take their major in Hydraulic Engineering.

5 units, 2d semester (MARX) Lec. MWF 10; Dft. MT 1:05-4:05

15. **Construction of Canals, River and Harbor Improvements.**—Lectures and designing as per arrangement. Open to students who have completed courses 2*a*, 2*b*, and 3 in Engineering and 4*a* and 8*a* in Civil Engineering.

2 units, both semesters (MARX) MT 1:05-4:05

16. **Technical Seminary.**—Study of German and French technical journals. Open only to fourth-year students in Civil Engineering.

2 units, both semesters (MARX) By arrangement

LABORATORY FEES—Courses 5*b*, 6*b*, 6*c*, 50 cents each; 8*b*, $2; 4*a*, 4*b*, 6*a*, $4 each.

II. ELECTRICAL ENGINEERING

Harris Joseph Ryan, Professor.
James Cameron Clark, Assistant Professor.
Fred L. Mulock, Instructor.

A five-year curriculum is arranged for students who will be graduated with the degree of Engineer in Electrical Engineering. The courses taken up during the first four years are identical in Mechanical and Electrical Engineering; both classes are registered in the Mechanical Engineering Department. Students successfully completing this portion of the curriculum will be graduated with the degree of Bachelor of Arts. While pursuing courses scheduled for the fifth year of the Electrical Engineering curriculum students are registered as majors in the Electrical Engineering Department.

First, Second, Third and Fourth Year courses are identical with corresponding Mechanical Engineering courses.

Fifth Year—Differential Equations, Hyperbolic Functions and Determinants (Applied Mathematics, 3 units); Electrical Engineering Technology (Electrical Engineering 4*a*, lectures, 5 units, and 4*b*, laboratory, 8 units): Photometry and Illumination (Physics 9*a*, 1 unit); Alternating and Transient Current Phenomena (Electrical Engineering, 3 units); Electrophysics: Foundation of Electrotechnics (Physics, 4 units); Thesis (Electrical Engineering *T*, 6 units); Seminary (Electrical Engineering *S*, 2 units). Total, 31 units.

1. **Electricity in Engineering.**—An abridged course in the industrial applications of electricity, intended for non-electrical engineering students. Prerequisites: first five semesters of any of the Stanford Engineering curricula.
4 units, 2d semester (Clark, Mulock)
Lec. WF 9; Lab. by arrangement

2. **Electrical Energy.**—Required of third-year students in Mechanical and Electrical Engineering. Class and laboratory instruction in the technology of magnetic, electric, and electrostatic phenomena, introductory study of meters, transformers, machines, and auxiliaries. Prerequisites: Applied Mathematics 1, 2, 3; Engineering 1*a*, 1*b*, 2*a*, 2*b*; Mechanical Engineering 11, 13*a*, 13*b*; Physics 6*a*, 6*b*, 9.

2*a*. *Recitations.*
2 units, 2d semester (Mulock) Th 8, 10

2b. Laboratory Work.

2 units, 2d semester (Clark, Mulock) MTWTh 1:05-4:05

[Course 2 is supplemented by Physics 9, laboratory work in electrical measurements, 2 units, 1st semester.]

3. Electrical Engineering.—Required of fourth-year students in Mechanical Engineering and Electrical Engineering. Lectures, laboratory, and class work. Prerequisites: Electrical Engineering *2a, 2b*; Engineering *3a*.

3a. Lectures.—General Practice. (1) Standardization authorized by the A. I. E. E. (2) Fire Hazard, National Electrical Code. (3) Transmission Economies. (4) Standard Machinery, Auxiliaries and Structural Supplies. (5) Municipal Distribution of Electricity for Miscellaneous Service. (6) Long Distance Transmission of Power for General Purposes. (7) Discussion of Typical Installations. (8) Elements of Finance Controlling the Uses of Electricity. (9) Survey of Electrical Industries. (10) Historical and Biographical Sketches.

3 units, 2d semester. (Ryan) MWF 8

3b. Laboratory Work.—Characteristic performance of standard machinery and auxiliary apparatus.

4 units, 1st semester (Clark, Mulock) By arrangement

4. Electrical Engineering Technology.—

Lecture Courses.—Properties of materials of construction and technical study of machinery, transformers, transmission lines, distributing systems and auxiliaries.

a'. Machinery. 2 units, 1st semester (Clark)

a''. Transmissions. 3 units, 1st semester (Ryan)

Laboratory Courses.—Materials tests; machinery and auxiliaries design data and acceptance tests; special meter performance tests and calibrations.

b'. Meters. 2 or 3 units, 1st semester (Mulock)

b'', *Machinery.* 2 or 3 units, 1st semester (Clark)

b'''. Transmissions. 2 or 3 units, 1st semester (Ryan)

(8 units required.)

5. Alternating and Transient Current Phenomena.—Steinmetz and Kennelly methods, including applications of hyperbolic functions and determinants for obtaining the physical constants and characteristic behavior of electromagnetic circuits. This course is given by the Departments of Applied Mathematics and Electrical Engineering in co-operation. Recitations and problems. Prerequisite: Applied Mathematics 8.

3 units, 2d semester (Ryan, Moreno) By arrangement

10. Seminary.—A weekly conference for the discussion of current electrical engineering literature and of special topics.

1 unit, both semesters (RYAN) By arrangement

11. Thesis.—Subjects as approved to suit the needs of the individual.

1 unit, 1st semester; 5 units, 2d semester (RYAN, CLARK, MULOCK)

The Stanford Branch of the American Institute of Electrical Engineers is an organization authorized by the Institute and maintained by the members of the graduating class for the discussion of the Proceedings of the Institute, and of other topics as assigned, and the review of current electrical literature.

LABORATORY FEES—$2 per unit of university credit.

SYLLABUS FEES—Applicable to syllabus, lantern slides, and charts, $1 per course-section.

III. MECHANICAL ENGINEERING

WILLIAM FREDERICK DURAND, GUIDO HUGO MARX, WILLIAM RANKINE ECKART, Professors.

EVERETT PARKER LESLEY, Associate Professor.

CHARLES NORMAN CROSS, LAWRENCE EDMINSTER CUTTER, Assistant Professors.

EDWARD JOHN STANLEY, JAMES BENNETT LIGGETT, THERON JAMES PALMATEER, ROBERT HENRY HARCOURT, HORATIO WARD STEBBINS, Instructors.

The following courses constitute a five years' curriculum leading to the degree of Mechanical Engineer. Students successfully completing the first four years of this curriculum will be granted the degree of Bachelor of Arts.

[Numbers in parentheses indicate number of units credit for the year.]

FIRST YEAR—Applied Mathematics, course 1 (10); Freehand Machine Drawing, M. E. course 11 (2); Chemistry, courses 1 and *a* (9); Shop Work, M. E. courses 1 and 3 (6); Modern Language (6); Mechanical Engineering A (2).

SECOND YEAR—Applied Mathematics, course 2 (6); Mechanics, Applied Mathematics, course 3 (10); Linear Drawing and Descriptive Geometry, Engineering 1*a* and 1*b* (6); Physics, course 6 (8); Shop Work, M. E. course 5 (2).

THIRD YEAR—Applied Mechanics, Engineering course 2 (5); Hydraulics and Hydraulic Motors, Engineering course 3*a* (5); Hydraulic

Laboratory, Engineering course *3b* (2); Machine Drawing, M. E. course 12 (2 or 3); Elementary Machine Design, M. E. course 13 (5); Surveying, C. E. course *4b* (2); Metallurgy, course 1 (3); Physics, course 9 (2); Electrical Engineering, E. E. course 2 (3); Shop Work, M. E. courses 6 and 7 (5).

FOURTH YEAR—Heat Engines, M. E. courses 32 and 33 (6); Engineering Reports, M. E. course 31 (2); Machine Design, M. E. course 14 (8); Experimental Engineering, M. E. courses 21, 22 (6); Electrical Engineering, E. E. courses *3a* and *3b* (7); Shop Work, M. E. course 8 (3).

FIFTH YEAR—Thermodynamics, M. E. course 34 (1); Advanced Design, M. E. course 16 (3, plus 3 elective); Experimental Engineering, M. E. course 23 (3); Economics (3); Shop Administration, M. E. course 10 (3); Power Plants, M. E. course 35 (4); Pumping Machinery, M. E. course 36 (2); Seminary, M. E. course 37 (elective) (2); Thesis (8); Hydraulic Machinery Laboratory, M. E. course 26 (2 elective).

The above represents the requirement for the student entering regularly with minimum mathematics and no advanced credit. For such student, in addition to the above curriculum, there should be a maximum possible elective among other subjects in other departments of the University of nineteen units. For students who may bring advanced credit in drawing, shop work, chemistry, and other subjects, the amount of possible elective may be considerably increased.

A. General Survey of Engineering Industries.—Special lectures and assigned topics. Required of first-year students.

1 unit each semester By arrangement

1-8. Shop Work:—

1a. Forge Practice.—(2 exercises a week, half year.)

1b. Lecture in Forge Work.

3a. Foundry Practice.—(2 exercises a week, half year.)

3b. Lecture in Foundry Work.

5. Woodworking.—(2 exercises a week, half year.)

6a. Pattern Shop Practice.—(2 exercises a week, half year.)

6b. Lecture in Pattern Shop Work.

Courses *3a* and *3b* are prerequisite to courses *6a* and *6b*.

7. Elementary Machine Shop Practice.—(2 hours a week, half year.)

Courses *1a* and *1b* are prerequisite to course 7.

8. Advanced Machine Shop Practice.—(3 hours a week, half year.)

Courses 1-8 are open to all students, and required of students in Mechanical Engineering.

2 or 3 units, each semester

(Lesley, Stanley, Liggett, Palmateer, Harcourt)

10. Shop Administration.—A course of lectures on workshop organization and administration, factory accounting, wage systems, selection of machinery, factory methods, etc. Prerequisites: courses 1 to 7 inclusive.

3 units, 1st semester (Lesley) MWF 9

11. Freehand Machine Drawing.—Practice in making freehand sketches of machine parts, and their dimensioning in practical form for use in the shop, the sketches being made according to the principles of orthographic projection. The aim is to train the student in the reading of machine drawings through making a considerable number of sketches from actual machines and machine parts, and at the same time to familiarize him as much as possible with the actual machine parts. Open to all students, and required of students in Mechanical Engineering. (Six hours a week. second semester.)

2 units, 2d semester (Cutter) ThF 1:05-4:05

12. Elementary Machine Drawing.—Practice in making working drawings of machine parts, and in making tracings from these drawings. The purpose of the course is, not only to train the student in the technique of drafting and dimensioning, but also to familiarize him with the elements of machines, and, therefore, no drawings are made from copy, but all are made from the student's own sketches of the actual model. (Six or nine hours a week in drafting room; three hours work for one unit credit.) Prerequisite: course 1*a* in Engineering, and first semester's work, in Engineering 1*b*, or its equivalent; and, for Mechanical Engineering students, course 12 in Mechanical Engineering.

2 or 3 units, either semester (Cutter)

(I) TTh 8-12; (II) MT 1:05-4:05

13. Elementary Machine Design.

a. Function of machines; motion, force, and work in machines; analysis of mechanisms; velocity, acceleration, and effort diagrams; parallel motions; cams; ratchets; toothed wheels; valve gear analysis and design. The aim is, not merely to present a course in pure mechanism, or kinematics, but also—by the introduction of the consideration of force, work, and energy, as well as motion—to show the purposes for which the mechanisms are used and the manner in which they function. (Three hours a week, lectures and recitations, second semester.) (3 units)

b. Drafting course applying the principles treated in *a*. (Six hours a week drafting, second semester.) (2 units)

Prerequisites: course 12 in Mechanical Engineering and course 1*b* in Engineering. Courses *a* and *b* must be taken together and are required of students in Mechanical Engineering.

5 units, 2d semester (G. H. MARX)
Lec. MWF 8; Drafting M or T or F 1:05-4:05

14. Machine Design.—Study of machine elements, such as bolts and screws; riveted joints and boiler design; keys, fits and fitting; axles, shafts, and spindles; journals, bearings, friction, and lubrication; ball and roller bearings; sliding surfaces; couplings and clutches; gear, belt, rope, and chain transmission systems; flywheels; brakes; springs; frames and supports; cylinders, etc.; leading to the design of complete simple machines. (Two hours a week recitation and lectures, six hours in the drafting-room, throughout the year.) Open to students who have completed course 13 in Mechanical Engineering, and who are taking course 2 in Engineering; required of students in Mechanical Engineering.

4 units, both semesters (G. H. MARX)
(1st sem.) Lec. MW 10; Dft. MT 1:05-4:05
(2d sem.) Lec. TTh 8; Dft. MW 9-12

15. Machine Design.—An abridged treatment of the field covered in courses 13 and 14. (Three hours a week recitations and lectures, six hours a week in the drafting-room, first semester.) Open to students who have completed Engineering 1*b*, Mechanical Engineering 12, and are taking Engineering 2. Intended for Engineering students whose major subject is not Mechanical Engineering.

5 units, 1st semester (G. H. MARX)
Lec. MWF 8; Dft. ThF 1:05-4:05

16. Advanced Machine Design.—Design of complete machines. Students may elect machine tools, cranes, steam or gas engines, or special problems. (One lecture and six hours drafting per week.) Intended for fifth-year students who have completed courses 14, 32, and 33.

3 units, both semesters (G. H. MARX, CUTTER)
Lec. F 10; Drt. 1:05-4:05, by arrangement

21-30. Experimental Engineering.

21. Calibration and Use of Engineering Apparatus and Instruments, including gas meters, thermometers, planimeters, indicators, dynamom eters, fuel calorimeters, and the testing of lubricating oils. (One lecture, three hours in the laboratory, and five hours on reports, per week.) Required of fourth-year students in Mechanical Engineering.

3 units, 1st semester (ECKART, CROSS, STEBBINS)
Lec. W 11; Lab. WThF 1:05-4:05 and F 9-12, by arrangement

22. *Testing of Steam Engines and Boilers,* including determination of engine clearance; measurement of the flow of steam; steam calorimetry; valve setting; mechanical efficiency, economy, and thermal tests of steam engines, steam turbines, gas engines; tests for speed regulation, flue gas analysis, and the testing of boilers. (One lecture, three hours in the laboratory, and five hours on reports, per week.) Open to students who have completed courses 21 and 32. Required of fourth-year students in Mechanical Engineering.

3 units, 2d semester (ECKART, CROSS, STEBBINS)
Lec. T 11; Lab. 1:05-4:05, by arrangement

23. *Testing of Power Plant Auxiliaries,* including hot-air engines, injectors, heaters and economizers, blowers, turbo-compressors, condensers, refrigerating machinery, automobiles, and a complete power-plant test. (One lecture, three hours laboratory, and five hours on reports, per week.) Open to students who have completed courses 21 and 22. Required of fifth-year students in Mechanical Engineering.

3 units, 1st semester (ECKART, CROSS, STEBBINS)
Lec. F 8; Lab. 1:05-4:05, by arrangement

24. *An Abridged Course in Experimental Engineering,* intended for Civil Engineering students. Includes the calibration of planimeters, testing of steam and gas engines, steam turbines, boilers, and air compressors. (One lecture, three hours in the laboratory, and eight hours on reports, every two weeks.) Open to students who have completed course 32. (3 hours)

2 units, 1st semester (ECKART, CROSS, STEBBINS)
Lec. T 9 (alternate weeks); Lab. 1:05-4:05, by arrangement

26. *Testing of Hydraulic Machinery.*—Including tangential water wheels, turbines, rams, centrifugal, rotary, jet, steam pumps, and sewage ejectors, and the investigation of surges in pipe lines, etc. (One lecture, three laboratory hours, and eight hours on computations, reports, etc., every two weeks.) Open to students who have taken Engineering *3b* and Mechanical Engineering 21, 22, 24, or 27.

2 units, 2d semester (ECKART, CROSS)
Lec. Th 9 (alternate weeks); Lab. 1:05-4:05, by arrangement

27. An Abridged Course in Experimental Engineering, intended for Geology and Mining, and Chemical Engineering students. Includes: proximate analysis of coal, determination of calorific value of coal, fuel oil and gas, moisture in fuel oil, physical tests of oil, calibration of planimeters, flue gas analysis, and the testing of steam and gas engines, steam turbines, boilers, and air compressors. (One lecture, three hours laboratory, and five hours on reports per week.) Open to students who have completed M. E. 32. (3 hours)
3 units, 2d semester (ECKART, CROSS, STEBBINS)
Lecture to be arranged; Lab. 1:05-4:05, by arrangement

30. An Advanced Laboratory Course in the Investigation of Engineering Problems. Open to all students who have completed courses 21, 22, and 23.
1 to 5 units, both semesters (ECKART, CROSS)

31. Engineering Reports and Specifications.—Practice writing, with occasional lectures. Required of fourth-year students in Mechanical Engineering.
2 units, 2d semester (LESLEY) By arrangement

32. Heat Engines.—Mechanical theory of heat and its applications. (Two lectures and three hours' office work per week.) Required of fourth-year students in Mechanical Engineering.
3 units, 1st semester (DURAND, STEBBINS) TTh 9-12

33. Heat Engines.—Continuation and application of course 32. (Two lectures and three hours' office work per week.) Required of fourth-year students in Mechanical Engineering. Lecture and office work as for 32.
3 units, 2d semester (DURAND, STEBBINS) TTh 9-12

34. Thermodynamics.—A course in theoretical thermodynamics, with special reference to heat engines, and intended to supplement course 32, which is a prerequisite. Required of fifth-year students in Mechanical Engineering.
1 unit, 2d semester (DURAND) M 8

35. The Mechanical Engineering of Central Power Stations.—Lectures. Prerequisite, course 32.
2 units, 1st semester (DURAND) MW 10

35b. Hydraulic Power Stations.—A discussion of the principles which enter into the design of hydraulic power stations; general control of water in tunnels and penstocks, surge chamber control of surges and shocks, valves and regulating devices, penstocks and their installa-

tion, selection of units, characteristics of impulse and reaction types, speed regulation, installation tests, and special problems. Open to students who have completed Engineering *3a*.
2 units, 1st semester (DURAND) MW 8

36. Pumping Machinery.—A lecture course for fifth-year students. Prerequisite: course 32 and Engineering *3a*.
2 units, 2d semester (DURAND) TTh 10

37. Seminary.—A weekly conference for the discussion of current engineering literature and of special topics. Open to senior and advanced students only.
1 unit, both semesters (DURAND) By arrangement

LABORATORY FEES—Courses 1*a*, 3*a*, 7*a*, $4 per credit hour; courses 5, 6*a*, $3 per credit hour; course 8, $2 per credit hour; courses 21, 22, 23, 24, 26, 27, 30, $2 per credit hour; 32, $1; 35, 50 cents.

ENGLISH

WILLIAM HERBERT CARRUTH, RAYMOND MACDONALD ALDEN, JOHN S. P. TATLOCK, Professors.

LEE EMERSON BASSETT, HENRY DAVID GRAY, WILLIAM DINSMORE BRIGGS, Associate Professors.

SAMUEL SWAYZE SEWARD, JR., HOWARD JUDSON HALL, EVERETT WALLACE SMITH, †THERESA RUSSELL, Assistant Professors.

ELIZABETH CHURCH, Acting Assistant Professor.

†EDITH RONALD MIRRIELEES, †FRANK ERNEST HILL, ELISABETH LEE BUCKINGHAM, ARTHUR GARFIELD KENNEDY, HARRIET BRADFORD (Dean of Women), Instructors.

MARGERY BAILEY, KARL ELIAS LEIB, SARAH F. WOLVERTON, Assistants in Instruction.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF ARTS

a. The courses ordinarily prescribed in the major subject include Chaucer, Shakespeare, the advanced courses, 81, 82, 83, 84, in the History of English Literature (four semesters) and an advanced course in a single author (as Milton, Wordsworth, or Spenser), besides such preliminary courses in composition, vocal expression, or literature as may be advised in individual cases. In the advanced courses in English Literature one of two substitutions may be made: (*a*) for the second semester's work in the earlier period, the course in Elizabethan Drama; or (*b*) for the first semester's work in the later period, the course in Modern English Fiction (68). (Students making English their major subject in preparation for journalism may substitute for two of the advanced courses in literature appropriate courses in some other subject, with the approval—to be obtained in advance—of their adviser.)

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† Absent on leave, 1916-17.

b. It is required also that each student pursue work in one foreign language and literature sufficiently for the accomplishment of two ends, (1) a practical reading knowledge of the language chosen, and (2) some acquaintance with its most important literature. This requirement is not primarily a matter of formal credit-hours, but will ordinarily be found to demand a minimum of 16 units of college work in the chosen language, aside from elementary courses (two years in the high school or one in the university). Students should be sure that their language studies are so planned as to accomplish the ends desired. (Introductory courses in Latin and Greek, if pursued in the University, will be counted as college work. Those who make Latin or Greek their principal language are advised, in general, to include two years of work in a modern language among their elective studies; and those who have chosen a modern language are encouraged to include among their elections two years of work in Latin or Greek.)

c. A course in English History is also prescribed for those who have not had a separate course in the subject in the high school.

THE TEACHER'S RECOMMENDATION.—The High School Teachers' Certificate is granted by the State to students who have fulfilled the State requirements as set forth on pages 87-89 of the *Register*. Recommendation by the department is granted by vote to students whose work has been of high character. It should be distinctly understood that a mere passing grade does not entitle a candidate to the endorsement of the department. The undergraduate courses usually prescribed are Vocal Expression, Shakespeare, Chaucer, Versification, English Language, Teachers' English, a full year's course in English literary history, and a half-year course in a literary type. The graduate courses must comprise not less than four units of work for each semester of study.

ADVANCED DEGREES

The candidate for the Master's degree in English must have: (1) The equivalent of the requirements for the A. B. degree in English; (2) an elementary knowledge of Old English; and (3) a reading knowledge of two foreign languages (preferably one ancient and one modern).

The work for the degree must occupy at least one full year of graduate study in residence, the greater part in English, the remainder in related fields. The courses in English will be divided between literature and philology. The candidate must present a thesis prepared under the direction of a member of the department and demonstrating the candidate's power of concentrated, independent study. This thesis may be accepted in lieu of not more than six units of the work in course.

For the conditions of acquiring the Doctor's degree, see the Graduate Study Bulletin.

PRELIMINARY AND GENERAL COURSES

[In general, courses 1-15 are open to first-year students; courses 16-30 are open to second-year students.]

A. Elementary Composition.—A one-semester course required of all first-year undergraduates who do not pass the matriculation test in English.

1 unit, either semester (CHURCH, TATLOCK, BRADFORD, KENNEDY, BAILEY, WOLVERTON) TTh 8, 9, 10, 11

[For each student in course A, except in case of those who meet the requirement within a short time, a fee of $10 is charged.]

2. English Composition.—Practical work in narration and description, first semester; in exposition, second semester. Membership in this course being limited to 180, students will be accepted in order of registration up to 5 p. m., August 30th. English majors are expected to enroll in section I, Journalism students in section II (see schedule).

2 units, both semesters (CARRUTH, HALL, GRAY, SMITH, SEWARD, CHURCH, EVANS, BAILEY, WOLVERTON) TTh 8, 9, 10, 11

4. Vocal Expression.—A study of the principles of expressive reading, and the vocal interpretation of masterpieces in prose and poetry, with supplementary work in voice development. Each student is expected to memorize and vocally interpret some 350 lines of Shakespeare during the semester. The course is open to a limited number of students in the order of their application. Application should be made before the first meeting of the class in the semester, and the instructor reserves the right to refuse to enroll students who do not appear at the first session of the class. Three sections.

3 units, either semester (BUCKINGHAM) MWF 8, 9, 11

5. Reading Aloud.—Practice in the application of the fundamental principles of effective reading to varied types of literature. Prerequisite: course 4.

2 units, either semester (BUCKINGHAM) Th 10

6. Practical Phonetics.—A course in the enunciation and pronunciation of the English language. Designed especially for foreign students.

1 unit, either semester (BASSETT) T 3:05

7. Extemporaneous Speaking.—Practice in extemporaneous speaking on subjects of current interest, with some attention to the preparation of speech outlines. Six sections, first semester, two sections, second semester.

2 units, either semester (BASSETT, EVANS, LEIB)
I, II, TTh 9; III, IV, V, T 1:05-3:05; VI, Th 1:05-3:05

8. Outline History of English Literature.—A survey, critical and historical, of English literature in its larger aspects, with readings. Designed primarily for first-year English major students who have not taken a high school course in the subject.

3 units, 1st semester (CHURCH) MWF 10

9. American Literature.—General survey of the history of American literature, with reading of selected representative works. For first-year or second-year students. Not open to students having entrance credit in the subject.

3 units, 2d semester (HALL) MWF 10

10. English Classics.—A study of representative works of great English writers from Malory to Browning, with assigned reading and writing. Open only to first-year students who are not English majors.

3 units, either or both semesters (WOLVERTON) TThS 10

11. Introduction to Poetry.—A study of the nature, methods, and forms of poetry, with exercises in analysis and interpretation. Open to students of all departments.

3 units, 2d semester (ALDEN) MWF 11

13. Free Reading.—Intended to encourage familiarity with books and to supply an opportunity for more general reading. Open to a limited number of students from other departments. Six hours of reading weekly.

2 units, either semester (CARRUTH, ALDEN, BRIGGS, BRADFORD, TATLOCK, WILLIS) By appointment

14. Tennyson.—A study of selected portions of Tennyson's poems, illustrating the growth of his literary art. A general course, designed for first- and second-year students, and open to third- and fourth-year students by permission only.

3 units, 1st semester (HALL) MWF 9

16. Advanced Composition.—Including both rapid writing and the preparation of long themes. Prerequisite: course 2.
3 units, both semesters (EVANS) MWF 9

17. News Writing.—Practice in abstracting and condensing, writing within time and space limits, copy-reading and headline writing; together with instruction in methods of gathering news, and in the duties of the various members of a newspaper staff. Prerequisite: course 2.
2 units, both semesters (SMITH, HOFFMAN) TS 11

19. Vocal Interpretation.—*a*. An advanced course in the vocal interpretation of literature. Designed particularly for those who intend to teach English literature. Prerequisite: courses 4 and 5.
2 units, 1st semester (BASSETT) MW 1:05

b. Dramatic Literature (second semester). Scenes assigned from Shakespeare and from modern plays of literary merit. Members of the class will vocally interpret characters and scenes assigned for individual study. Prerequisite: course 19*a*.
2 units, 2d semester (BASSETT) MW 1:05

20. Practical Debate.—Under supervision of the department those students who make the practice squads for any intercollegiate debate may receive credit, upon satisfactory completion of the work.
1 or 2 units, either or both semesters (BASSETT, LEIB)

22. Victorian Prose.—A survey of Victorian prose, with special emphasis upon Carlyle, Ruskin, and Arnold.
2 units, 2d semester (CHURCH) TS 11

23. Victorian Poetry.—A study of selected Victorian poets.
2 units (SEWARD) [Not given in 1916-17.]

24. English Bible.—Representative portions of the Bible studied as literature, with some consideration of the history and the prose style of the English versions. Not open to first-year students.
3 units, 2d semester (GRAY) [Not given in 1916-17.]

25. Shakespeare.—The first semester's work consists of a rapid reading of a considerable number of the plays in chronological sequence. The second semester is devoted to a careful study of three or four plays. Open in the first semester to all second-year students; in the second semester to English majors and such others as show special interest and aptitude.
3 units, either or both semesters (GRAY, ALDEN) MWF 10

27. Browning.—Open only to students especially recommended.
2 units, 1st semester (HALL) TTh 9

ADVANCED AND SPECIAL COURSES

[Unless otherwise specified, the following courses are open to third-year and fourth-year students of all departments.]

31. Exposition.—An advanced course. Special attention will be given to students preparing theses or other papers. Prerequisite: course 2 or equivalent.
2 units, 2d semester (HALL) TTh 9

32. Argumentation.—The theory of argumentation, with practice in the preparation of briefs and forensics. Open to all students who have made a satisfactory grade in English 2.
2 units, both semesters (BRIGGS, LEIB) TTh 8

34. Play Construction.—The principles of dramatic writing developed in connection with the student's own work, together with the critical analysis of certain successful plays of the present.
2 units, both semesters (GRAY) W 2:05-4:05

35. Prosody and Verse Writing.—Study of lyric poems, with practical exercises in the same. Open also by permission to second-year students who have had four units in English composition.
2 units, 2d semester (CARRUTH) T 3:05-5:05

36. Short Story Writing.—Practice in the writing of short stories, and a study of the principles governing their composition.
2 or 3 units, both semesters (SEWARD) T 1:05-3:05

36a. Conferences dealing with the construction of the short story. Open by permission to students who have completed English 36.
2 units, both semesters (MIRRIELEES) [Not given in 1916-17.]

37. Essay Writing.—Preparation of magazine articles, criticisms, and papers of both informal and analytical character. Prerequisite: course 2.
2 or 3 units, both semesters (RUSSELL) [Not given in 1916-17.]

40. Editorial Writing.—A study of the purpose and power of the newspaper editorial.
2 units, 1st semester (HOFFMAN) TTh 9

41. News Analysis.—A systematic study of current news.
1 unit, 2d semester (SMITH) [Not given in 1916-17.]

42. Correspondence.—Instruction and practice in the work of the newspaper correspondent.
2 units, both semesters (SMITH) [Not given in 1916-17.]

43. American Journalism.—A survey of the development of journalism, with a study of representative newspapers. (Course 17 a prerequisite).
3 units, both semesters (SMITH) TTh 10

44. Practical Reporting.—Work on the staff of the *Stanford Palo Alto News.*
3 units, both semesters (SMITH, HOFFMAN) MW 1:05

45. Editorial Management.—Practical work on the editorial staff of the *Stanford Palo Alto News.*
3 units, both semesters (SMITH, HOFFMAN) WF 1:05

46. Advertising.
2 units, both semesters (HOFFMAN) TTh 8

50. Public Speaking.—Practice in the preparation and delivery of speeches adapted to various audiences and occasions, with attention to the style of spoken discourse. Prerequisite, course 7. Four sections.
2 units, 2d semester (BASSETT, EVANS, LEIB)
(I, II, III) T 1:05-3:05; (IV) Th 1:05-3:05

51. Public Reading.—A course in the preparation of poems, stories, and scenes from novels and plays for public presentation. Open to a limited number only.
2 units, both semesters (BASSETT) M 2:05-4:05

52. Oral Debate.—Practice in the preparation and delivery of oral arguments, chiefly on current public questions. Open to a limited number of students who have had satisfactory experience in public speaking, to be admitted in the order of application.
2 units, both semesters (BASSETT, LEIB) W 2:05-4:05

55. Old English.—Elements of Old English Grammar with reading exercises.
3 units, 1st semester (KENNEDY) MWF 8

56. English Language.—An outline study of English in the light of its historical development.
2 units, 1st semester (SEWARD) TTh 8

58. Chaucer.—This course is elementary and includes an outline of Middle English Grammar for the beginner. Open to third-year stu

dents who have a reading knowledge of one foreign language. For special outside work an extra credit will be given.
2 or 3 units, 1st semester (KENNEDY) (I) M 1:05-3:05; (II) Th 1:05-3:05

60. Spenser.—Primarily for fourth-year students of the English department.
2 units, 2d semester (BRIGGS) [Not given in 1916-17.]

61. Milton.
2 units, 2d semester (BRIGGS) TTh 10

62. Wordsworth.
2 units, 1st semester (HALL) [Not given in 1916-17.]

65. Introduction to Comparative Literature.—An exposition of the comparative method in literary study, with a survey of the distribution of types in world literature. Open to third-year and fourth-year students who have had not less than ten units in English literature.
2 units, 1st semester (CARRUTH) TTh 9

66. National Epics.—Reading in translation of the Mahabharata, the Iliad, the Æneid, the Beowulf, the Song of Roland, the Nibelungenlied, and the Kalewala. Open also to graduates.
3 units, 2d semester (CARRUTH) WF 8

67. The History of Prose Fiction.—Including the beginnings of English fiction to DeFoe.
2 units, 2d semester (CARRUTH) WF 9

68. English Fiction.—A course in the history of English fiction from DeFoe through the major novelists of the nineteenth century.
3 units, 1st semester (CHURCH) MWF 9

69. The Modern Novel.—The reading of one novel a week, supplemented by lectures covering additional works of the authors studied and some account of other important novelists of the time.
3 units, 1st semester (GRAY) TTh 10

70. The English Drama to 1642.—The beginnings and development of the drama.
3 units, 1st semester (BRIGGS) [Not given in 1916-17.]

71. The Modern Drama.—A study of certain significant dramas of Ibsen, and of contemporary dramatists.
3 units, 2d semester (GRAY) MWF 9

72. Satire in English Literature.—An analysis of humor and satire (with the emphasis on the latter) both as abstract qualities and as elements of literature. Historical survey and study of illustrative examples. Not open to first-year students.
3 units, 1st semester (RUSSELL) [Not given in 1916-17.]

80. Old English Literature to 1066.—Survey with lectures and reading in translation.
2 units, 2d semester (KENNEDY) M 1:05-3:05

81. Medieval Literature, with Special Reference to Middle English.—Primarily for fourth-year students of the English department. Special attention is paid to the literary relations of England and the Continent from the Anglo-Saxon period to the sixteenth century. The course will serve as a general introduction to medieval European literature, which is studied by types: romances, histories, visions, lyrics, fabliaux, etc. This course is continued in No. 88.
3 units, 1st semester (TATLOCK) MWF 11

82. English Literature from 1557 to 1700, Exclusive of the Drama.—Primarily for fourth-year students of the English department.
3 units, 2d semester (BRIGGS) MWF 11

83. English Literature from 1700 to 1780.—Primarily for third-year students of the English department.
3 units, 1st semester (ALDEN) MWF 11

84. English Literature from 1780 to 1832.—A continuation of course 83.
3 units, 2d semester (HALL) MWF 11

85. English Literature of the Revolutionary Era.—A study of the writings connected with the French Revolution and related movements, with emphasis on ideas rather than literary form. (Not open to major students in English, except by permission; open to other students in the third and fourth years, and to second-year students on recommendation from first-year courses in literature.)
2 or 3 units, 1st semester (ALDEN) MWF 9

[The following courses are open to graduates also.]

87. The Life and Thought of the 16th and 17th Centuries.—For seniors and graduates of all departments.
2 units, both semesters (BRIGGS) F 2-4

88. Medieval Literature from the Old English Period to the Sixteenth Century.—A continuation of course 81.
3 units, 2d semester (TATLOCK) MWF 11

90. American Poetry, Exclusive of the Drama.—A study of the greater American poets with especial reference to their relation to English and Continental literature. [In 1916-17 attention will be directed toward the reception and standing of these poets in foreign countries.]
3 units, 1st semester (CARRUTH) WF 8

93. Beowulf.
3 units, 2d semester (KENNEDY) MWF 10

94. Middle English Readings.
2 units, 2d semester (KENNEDY) [Not given in 1916-17.]

96. Ballads.
2 units, 1st semester (BRIGGS) W 1:05

98. Teachers' Course in English.—A study of the methods of teaching Composition (first semester) and Literature (second semester) in secondary schools. Open to fourth-year students.
2 units, both semesters (SEWARD) W 1:05-3:05

99. Versification.—An introduction to the theory of rhythm and metre, the history of English prosody, and the problems of reading and teaching verse. Open to fourth-year students and graduates; to third-year students by special permission.
2 units, 2d semester (ALDEN) TTh 8

GRADUATE COURSES

[Open also by consent of the instructor to advanced undergraduates.]

101. Introduction to Philology and Bibliography.
2 units, 2d semester (KENNEDY) Th 1:05-3:05

103. Tragedy.—A comparative study of the theory and practice of tragedy in various literatures.
2 to 4 units, both semesters (ALDEN) [Not given in 1916-17.]

104. Comedy.—An inquiry into the nature of the comic and into its literary uses, as exemplified especially in the drama.
2 units, both semesters (SEWARD) MW 11

105. Elizabethan and Seventeenth Century Lyric.—Special emphasis is laid on the Sonnets of Shakespeare and his contemporaries, and on the religious lyric of the age of Herbert.
2 to 4 units, 1st semester (ALDEN) T 2:05-4:05

107. Tennyson.—The Idylls of the King compared with their sources.
2 to 4 units, 1st semester (CARRUTH) Th 1:05-3:05

108. The Hildebrand Theme in General Literature.—A study of the source and migration of epic themes.
2 units, 2d semester (CARRUTH) [Not given in 1916-17.]

110. Chaucer (advanced course).—Most of the Canterbury Tales will be studied, especially the parts less often read, with attention to the structure and history of the work and its literary significance. Prerequisite: course 58 or its equivalent. Open to fourth-year students and graduates of other departments. For special outside work an extra credit will be given.
2 or 3 units, 1st semester (TATLOCK) TTh 4:05

111. Shakespeare.—An introduction to the bibliography of the subject, the history of the text, and methods of critical study.
2 to 4 units, 1st semester (ALDEN) [Not given in 1916-17.]

112. Shakespeare.—A critical study of one or more plays.
2 to 4 units, 2d semester (GRAY) T 2:05-4:05

113. Marlowe.
2 to 4 units, 1st semester (BRIGGS) [Not given in 1916-17.]

114. Jonson.
2 to 4 units, both semesters (BRIGGS) M 3:05-5:05

117. Journal Club: Literary Section.—Reports on current literature by the members of the course.
1 unit, both semesters (CARRUTH) Th 3:05

118. Early English Seminary.—Papers and Lectures. The subject for 1916-17 will be the story of the siege of Troy in medieval and modern literature, with special reference to Chaucer and Shakespeare.
2 units, 2d semester (TATLOCK) MW 3:05

JOURNALISM

The following curriculum is outlined for the guidance of students intending to enter journalism. It is based on the conviction that the best preparation for the journalistic career is the broadest possible college course with a preponderance of English, History, and Economics. The intending journalist will make one of these his major department, in accordance with his inclinations and with the advice of the instructor in journalism and the head of the department. He will be subject to the direction of the major department in conjunction with the instructor in journalism. He will be classified and his diploma marked, if so desired, "English (Economics, History) preparatory to Journalism." Intending journalists are encouraged to compete for opportunities to engage in college journalism and thus to obtain all possible practical experience during their course. When done systematically and under the direction of the instructor in journalism provision is made for a just amount of credit for such work.

DISTRIBUTION OF WORK

(*a*) English (15), Economics (15), History (15), Journalism (15); total, 60 units.

(*b*) Selection from at least five of the following divisions: Biology, Physical Science, Geology, Astronomy, Physiology and Hygiene, Philosophy and Psychology, Sanitary Engineering, Law, Medical Theory, Education; total, 30 units.

(*c*) Margin to complete requirements of major department, and for free choice, 30 units.

[A tentative working schedule of a four-years' curriculum in accordance with this outline will be furnished on application.]

COMPARATIVE LITERATURE

The following courses offered by the various departments of literature in the University pursue the comparative method and contribute to a survey of the literature of the world and the relations of the several literatures to one another. English majors are advised to elect as many as possible of these courses. Detailed description and the conditions of election are given under the respective departmental announcements.

INTRODUCTION TO COMPARATIVE LITERATURE. [English 65.]
THE ENGLISH BIBLE. [English 24.]
GREEK LITERATURE. [Greek 22.]
LATIN LITERATURE. [Latin 32.]
EARLY ENGLISH AND GENERAL MEDIEVAL LITERATURE. [English 81.]
HISTORY OF GERMAN LITERATURE. [German 13.]
THE REVOLUTIONARY ERA. [English 85.]
THE 18TH CENTURY. [English 83 and 84.]
THE VICTORIAN ERA. [English 22 and 23.]
NATIONAL EPICS. [English 66.]
THE GREEK EPIC. [Greek 19.]

THE HILDEBRAND THEME. [English 108.]
DANTE AND THE DIVINE COMEDY. [Romanic Languages 16, 25.]
CHAUCER. [English 58 and 95.]
TENNYSON: THE SOURCES OF THE IDYLLS OF THE KING. [English 107.]
THE HISTORY OF PROSE FICTION. [English 67.]
ENGLISH FICTION. [English 68.]
THE MODERN NOVEL. [English 69.]
MODERN GERMAN NOVELS. [German 5.]
THE FRENCH NOVEL IN THE 19TH CENTURY. [Romanic Languages 19.]
THE DEVELOPMENT OF TRAGEDY. [English 103.]
COMEDY. [English 104.]
GREEK TRAGEDY. [Greek 20.]
ROMAN COMEDY. [Latin 8.]
THE ENGLISH DRAMA TO 1642. [English 70.]
THE MODERN DRAMA. [English 71.]
ORIGINS OF THE SPANISH THEATER. [Romanic Languages 27.]
THE FRENCH DRAMA IN THE 19TH CENTURY. [Romanic Languages 19.]
BALLADS. [English 96.]
THE ENGLISH LYRIC. [English 105.]
LATIN SEMINARY: LYRIC POETRY. [Latin 22.]
GREEK SCULPTURE. [Greek 21.]
ROMAN ART AND ARCHAEOLOGY. [Latin 31.]
HISTORY OF GERMAN CIVILIZATION. [German 21.]
LIFE AND THOUGHT OF THE 16TH AND 17TH CENTURIES. [English 87.]
THE CLASSICAL INFLUENCE IN ENGLISH LITERATURE. [Latin 33.]
AMERICAN POETRY IN RELATION TO EUROPEAN. [English 90.]

ENTOMOLOGY AND BIONOMICS

†VERNON LYMAN KELLOGG, Professor.
RENNIE WILBUR DOANE, Associate Professor.
MARY ISABEL MCCRACKEN, Assistant Professor.
GORDON FLOYD FERRIS, Assistant in Instruction.

ENTOMOLOGY

1. **Elementary Entomology.**—The elementary study of insect structure, development, and classification, including practice in collecting and preserving specimens. A preparatory study of the subject of entomology. Laboratory and field work.

3 or 4 units, either semester (MCCRACKEN) Any forenoon hours

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†Absent on leave, 1916-17.

2. **Morphology and Physiology of Insects.**—A study of the metamorphosis, comparative morphology, and special physiology of insects.
3 or 4 units, either semester (McCracken) Any forenoon hours

3. **The Honey-bee and Apiculture.**—A study of the structure and habits of the honey-bee, and of the methods of bee-keeping.
2 units, 2d semester (McCracken) Hours by arrangement

4. **Economic Entomology: Coccidae (the Scale Insects).**—A study of the classification, general biology, and economic relations of the scale insects, with particular attention to the more important injurious ones of the Pacific Coast. Field, laboratory, and bibliographic work, with occasional lectures. Must be preceded by courses 1 and 2.
2 or 3 units, either semester (Doane)
Any three afternoons, 1:05-4:05

5. **Economic Entomology: Forest Insects.**—A study of the insect enemies of forest and shade trees. The course includes field, laboratory, and bibliographic work. Should be preceded by course 4.
3 units, 1st semester (Doane) MWF 1:05-4:05

6. **Economic Entomology: Orchard and Garden Insects.**—A study of the principal injurious and beneficial insects of the orchard and garden. Includes field, laboratory, and bibliographic work, and a weekly lecture on the history, principles, and practice of economic entomology. Should be preceded by course 4.
3 units, 2d semester (Doane) MWF 1:05-4:05

7. **Economic Entomology: Advanced Work.**—Studies of one or more groups of insects of economic importance, including systematic ecological investigations, and methods of controlling the injurious species. Field, laboratory, and library work, with occasional lectures. Intended for students fitting themselves for practical work in Economic Entomology. Open to advanced students by arrangement.
3 to 5 units, both semesters (Doane)

8. **Insects and Disease.**—A discussion of the insects that cause or disseminate some of the diseases in man and the domestic animals. Lectures and demonstrations. Open to students having some previous training in biology.
2 units, 2d semester (Doane) Lec. TTh 9

9. **Classification of Insects.**—A study of the classification of insects, and the literature of systematic entomology. Field and laboratory work.
4 units, either semester (McCracken) By arrangement

10. General Entomology and Insect Adaptations.—A course of lectures and demonstrations. Open to students who have had some work in biology.

2 units, 1st semester (McCracken) Lec. TTh 9

11. Insect Histology and Histologic Technic.—The study of the histology of insect tissues and organs, and the special methods of such study.

2 or 3 units, 1st semester (Kellogg) Hours by arrangement

12. Advanced Work.—Advanced study and investigation of the biology of insects. Laboratory and field work.

2 to 5 units, both semesters (Kellogg) By arrangement

BIONOMICS

13. Organic Evolution.—Lectures on the laws or principles of biology and the factors in organic evolution. Not open to first- and second-year students.

2 units, 2d semester (Kellogg) [Not given in 1916-17.]

14. Heredity.—A discussion of the modern knowledge of heredity with special reference to human inheritance. Not open to first- and second-year students.

2 units, 2d semester (Kellogg) [Not given in 1916-17.]

Work for graduate and special students will be specially arranged.

Major students in Entomology must obtain before graduation thirty units of credit in Entomology, and credit for course 1 in Zoology, and course 1 in Botany.

The Entomological Collections contain authoritatively determined specimens, accessible for comparison, in all of the insect orders, and include many sets of specimens illustrating the development and habits of insects. There is included, also, the most important existing collection of North American Mallophaga, comprising the types of four-fifths of all the species so far described from North America and the Pacific Islands, an unusually large collection of Coccidae (scale insects), and valuable series of specimens from the Galapagos Islands, Samoa, and the Philippine Islands.

Laboratory Fees.—$3 per semester for each laboratory course.

GEOLOGY AND MINING

GEOLOGY AND PALEONTOLOGY

BAILEY WILLIS (Geology), JAMES PERRIN SMITH (Paleontology), Professors.

AUSTIN FLINT ROGERS (Mineralogy), CYRUS FISHER TOLMAN, JR., (Economic Geology), Associate Professors.

MINING AND METALLURGY

DAVID MORRIL FOLSOM (Mining), GALEN HOWELL CLEVENGER (Metallurgy), Associate Professors.

HAYES WILSON YOUNG (Metallurgy), Assistant Professor.

VALENTINE RICHARD GARFIAS (Petroleum Technology), Instructor.

WALDEMAR FENN DIETRICH, Lecturer in Mining and Metallurgy.

Students intending to pursue their major subject in the Department of Geology and Mining should offer as a part of their entrance preparation solid geometry, trigonometry, advanced algebra, physics, and chemistry; otherwise the mathematics, physics, and chemistry must be taken in the University. Experience shows that students who are not prepared in mathematics to take Applied Mathematics 1 usually require five instead of only four years to acquire the degree of A. B.

Courses of study in the Department of Geology and Mining lead to the degree of Bachelor of Arts on completing four years of study, or the equivalent of one hundred and twenty units of credit. The degree of Engineer is given in Mining or Metallurgy on completion of an additional year, or the equivalent of thirty additional units of credit, including a thesis. The degree of Master of Arts may be secured at the close of the fifth year's work, including a thesis, in accordance with the regulations of the University (Register p. 83). The degree of Doctor of Philosophy is given on completion of the required additional work under the conditions stated in the Register (p. 84). The requirement that the work shall be done in residence may in part be waived on recommendation of the department when the needs of original investigation cannot be met at the University.

COURSES OF STUDY

The following is a list of the studies offered in the department. They are grouped under the heads of Geology, Mineralogy, Economic Geology, Paleontology, Mining, and Metallurgy. Certain elementary courses in the department are required of all students, as indicated: Geography 1, or Geology 1; Geology 2, 3; Economic Geology 1; Mineralogy 1; Paleontology 2. Other courses are elective, except that no study may be taken without proper preparation, and should be selected only after conference with the instructors. At least forty units of work in the department will be required for the degree of Bachelor of Arts of all students intending to follow the profession of geology and mining.

GEOLOGY

Geography 1: Physical Geography.—A lecture course on the aspects of the earth, treating of the facts, causes, and laws of physical geography; intended to give the student a knowledge of the physical world as the abode of man. Given alternately with Geology 1; required of all majors in Geology and Mining; open to students from any other department.

3 units, 1st semester (WILLIS) MWF 8

Geology 1: Elementary Geology.—A lecture course on elementary geology, comprising a discussion of the phenomena and processes of geologic changes and an outline of geologic history; given in alternate years in place of Geography 1. Designed to constitute an introduction to all other courses in the department, and required of all majors; open to students from any other department.

3 units, 2nd semester (WILLIS) TThS 8

3. **Field Excursions.**—Elementary practice in geological observation as illustrated by the local facts of the geology within reach from the University. Required of Geology and Mining majors and open only to them, except by special arrangement.

2 units, 1st semester (WILLIS, TOLMAN) Saturday forenoons

4. **Structural Geology.**—Advanced work in the structure of stratified, massive, and foliated rocks. Open only to students who have had Geology 1 to 3 inclusive and Mineralogy 1.

2 units, 2d semester (WILLIS) TTh 9

5. **Field Geology.**—Field practice in working out geology in the field and its representation upon topographic maps and sections. Prerequisites: Geology 1, 2, 3, 4, Mineralogy 1, and Civil Engineering 4*a*.

5 units, summer vacation (WILLIS, TOLMAN)

6. **Topographic Geology.**—Field and laboratory work, with the construction of geologic maps and sections. Open to students who have completed course 5 in Geology.

4 units, summer vacation (WILLIS, TOLMAN)

7. **Regional Geology.**—Lectures and reading, with discussions in seminar, on the geologic provinces of North America and other continents.

(WILLIS) By arrangement

8. **Advanced Geology.**—Reading and research work for advanced students in geology.

(WILLIS) By arrangement

MINERALOGY

Mineralogy 1: Common Minerals and Rocks.—The study of the more common minerals and prominent rock types. An elementary course with emphasis upon sight determination and simple physical and chemical properties. Introductory to the other courses in mineralogy and petrography. Open to students who have had Chemistry 1 and *a*. Required of all Geology and Mining students, and open to a limited number of other students in order of application.

3 units, 2d semester (ROGERS, HAWLEY)
Lec. TTh 11; Lab. T 1:05-4-05

2. **Crystallography.**—An elementary study of the geometrical and optical properties of crystals and of the polarizing microscope as an instrument of research. This course is intended primarily as a prerequisite for course 3, but may also be taken independently by chemistry and physics students as an introduction to the study of the solid state.

3 units, 1st semester (ROGERS) Lec. TTh 11; Lab. T 1:05-4:05

3. **Systematic Mineralogy.**—Systematic study of the important minerals and their determination by all available methods. Mineralogy 1 and 2 (Crystallography) and Chemistry 6 and *b* are prerequisites.

3 units, 2d semester (ROGERS) Lec. W 11; Lab. WF 1:05-4:05

4. **Petrography.**—Study of hand specimens and thin sections of the principal rock types and mineral deposits. In course 3 the properties or characters of minerals are considered, while course 4 is primarily concerned with the relations between associated minerals with special reference to their occurrence and origin. Preparation and study of polished ore sections will be under the direction of Professor TOLMAN. Mineralogy 2 and 3 are prerequisites.

5 units, 1st semester (ROGERS)
Lec. WF 11; Lab. WF and one period by arrangement, 1:05 4:05

5. **Advanced Mineralogy.**—Advanced work in crystallography, mineralogy, or petrography may be undertaken by properly prepared students.

2 to 5 units, either semester (ROGERS) By appointment

ECONOMIC GEOLOGY

Economic Geology 1: Non-Metals.—The occurrence, distribution, origin, and geologic methods of investigation of the non-metallic substances. Prerequisite, Mineralogy 1.
3 units, 1st semester (TOLMAN) MWF 8

2. Ores.—The ore-forming processes, modes of occurrence of the various types of ore bodies, and the structures of the ores. The geologic study of the metallization of the important mineral-bearing provinces of the world and especially of the United States, and the description of the important ore deposits typical of each province. Open to students who have completed or are taking Mineralogy 1.
3 units, 2d semester (TOLMAN) MWF 8

3. Seminar in Ore Deposits.—A review of the literature of ore deposits and the bearing of the data collected upon the problems of ore formation. Prerequisite, Mineralogy 4. (For seniors and graduate students.)
3 units, 2d semester (TOLMAN) By arrangement

4. Special Courses.—These include: (*a*) a study of the literature of some special phase of economic geology, with a thesis; (*b*) field investigations of some mine or mineral district, or the general economic geology of an assigned area; (*c*) microscopic studies of ores collected during field studies, or microscopic investigation of suites of specimens owned by the University. (For graduate students; in exceptional cases seniors will be admitted.)
(TOLMAN) By arrangement

PALEONTOLOGY

Paleontology 1: Systematic Paleontology.—History and character of fossils. Three lectures and six hours of laboratory work weekly.
4 units, 1st semester (SMITH) MWF 11

2. Historical Geology.—History and character of geologic formations. Three lectures and six hours' laboratory work weekly.
4 units, 2d semester (SMITH) MWF 11

3. Systematic Conchology.—Special studies in Tertiary and Recent Conchology of the West Coast. One lecture and two afternoons of laboratory work weekly.
2 units, both semesters (SMITH) TTh 1:05-4:05

4. Stratigraphic History of the Great Basin.
2 units, 1st semester (SMITH) TTh 10

5. Stratigraphy and Geologic History of California.
2 units, 2d semester (SMITH) TTh 10

6. Advanced Paleontology.—Original investigation of various problems in paleontology, especially of invertebrate morphology, and of the distribution of faunas. This course will consist entirely of private work, in field and laboratory. Open to advanced students and graduates.
2 to 5 units, both semesters (SMITH) By arrangement

MINING

Mining 1: Mining Excavation.—Lectures and assigned reading on explosives and drills, and on methods of earth, rock, and ore excavation, including shaft sinking and tunneling. Prerequisites: Geology 1, Mineralogy 1.
2 units, 1st semester (DIETRICH) TTh 8

2. Ore Dressing.—Crushing and concentrating machinery and methods.
2 units, 2d semester (FOLSOM) TTh 8

3. Mining Methods.—Prospecting, development, and mining methods. Prerequisites: Economic Geology 2 and 3; Mining 1.
*2 to 3 units, 2d semester (FOLSOM) TTh 8

4. Mining Machinery.—Lectures and assigned reading on the development and adaptation of power for mining purposes. Air compressors, pumps, hoists, and ventilating machinery. Mechanical handling of ore. Prerequisite for Mining students, Applied Mathematics 3.
*2 to 3 units, 2d semester (FOLSOM) MW 8

5. Petroleum Technology.—A general survey of the various problems involved in the exploitation of oil deposits.
3 units, 1st semester (GARFIAS) MWF 9

6. Petroleum Technology.—Detailed work on typical problems related to the various branches of petroleum engineering. Prerequisite, Mining 5. Students from other departments may register by permission of the instructor.
3 units, 2d semester (GARFIAS) By arrangement

7. Mine Engineering.—Lectures and assigned reading on general engineering and economic problems in connection with mining operations.
2 to 5 units, either semester (FOLSOM) By arrangement

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*Students in Geology and Mining will register for three units in Mining 3 and 4. Students from other departments will register for two units.

8. Summer Mining.—Students will be given credit for two months' systematic work in the mining districts, or in the oil fields, under conditions satisfactory to the department.

4 units

9. Petroleum Engineering.—This course is intended for students who expect to specialize in some branch of petroleum technology. Prerequisites: Mining 5 and 6 or equivalent oil field experience.

2 to 5 units, either semester (GARFIAS) By arrangement

10. Experimental Investigation of Petroleum Engineering Problems.—This course is given in co-operation with the Department of Mechanical Engineering and consists of laboratory work upon the physical properties of petroleum and its products, or other experimental work. Students will register in M. E. 29.

2 to 5 units (GARFIAS) By arrangement

METALLURGY

LECTURE COURSES

Metallurgy 1: Metallurgy of Constructive Materials.—Lectures upon the manufacture and properties of iron and steel and, to a less extent, the other alloys used in engineering. Open to students who have completed Chemistry 1.

2 units, 1st semester (CLEVENGER) MW 10

2. Hydro-Metallurgy of Gold and Silver.—Lectures upon the general principles of hydro-metallurgical practice, with particular reference to the cyanide process. The older and now obsolete processes of chlorination, hyposulphite lixiviation, patio and pan amalgamation, etc., are referred to very briefly. Open to students who have completed Chemistry 1 and *a*. Prerequisite of Metallurgy *c*.

2 units, 1st semester (CLEVENGER) TTh 9

3. General Metallurgy.—Lectures upon the general principles of metallurgy, the fundamental chemical reactions, fuels, refractory materials, pyrometry, and alloys. The minor metals are dealt with briefly in this course. Open to students who have completed Chemistry 1 and *a*.

3 units, 1st semester (YOUNG) MWF 10

4. Metallurgy of Lead.—Lectures upon lead smelting, refining of base bullion, the pyrometallurgy of gold and silver insofar as it is inseparable from that of lead, parting and electrolytic refining of Doré bullion. Open to students who have completed Chemistry 1 and *a*, and Metallurgy 3.

2 units, 2d semester (YOUNG) ThF 10

5. Metallurgy of Copper.—Lectures upon the smelting of copper ores, converting, electrolytic refining, and a brief discussion of the hydrometallurgy of copper. Open to students who have completed Chemistry 1 and *a*, and Metallurgy 3.

2 units, 2d semester (CLEVENGER) TW 10

LABORATORY COURSES

a. Assaying.—The determination of gold, silver, and lead in ores and metallurgical products by fire assay. Open to students who have completed Chemistry 1 and *a*.

2 or 3 units, either semester (CLEVENGER, YOUNG) MTW 1:05-4:05

b. General Metallurgy.—Laboratory work on the standardization and use of various types of pyrometers, and the metallographic study of a limited number of metals and alloys.

2 units, 2d semester (YOUNG) TF 1:05-4:05

c. Metallurgy of Gold and Silver.—This course involves the investigation and the making of a report upon the possible treatment of a gold or silver ore by the cyanide process. Open to students who have completed Chemistry *d* and Metallurgy 2 and *a*.

3 to 5 units, 2d semester (YOUNG) MTWThF 1:05-4:05

d. Flotation.—This course involves the investigation and the making of a report upon the possible treatment of an ore by flotation. Open to students who have completed Chemistry *d*, Metallurgy *a*, and Mining 2.

3 to 5 units, 1st semester (CLEVENGER, YOUNG)
MTWThF 1:05-4:05

e. Metallurgical Research.—Properly qualified students may take up any subject of metallurgical investigation in the laboratory and, under proper restrictions, certain investigations may be carried on in the field. Also work in bibliography.

2 to 8 units, either semester (CLEVENGER)
1:05-4:05, by arrangement

CURRICULA

After a four years' course, or 120 units of work, the degree of A. B. may be secured. A student may propose to specialize in geology, mineralogy, economic geology, paleontology, mining, including petroleum technology, or metallurgy, and should select the studies indicated by the + in the corresponding column. The arrangement of courses by years indicates the order in which they should be taken, but does not imply that any course must be taken in a certain year.

The degree of A. B. may also be secured by a course of studies covering 120 units selected with a view to a liberal education in science, as a preparation for a career in business or non-scientific professional work. Students proposing such a course should determine to supplement it by one or two years of additional preparation for their life work. The election of studies will be directed by the major professor.

During the fifth year candidates for the degree of A. M. or Engineer of mines or Metallurgy will pursue such courses as may be required to fill out any omissions of previous years, or such as may be recommended by the instructor in the particular branch of professional work.

COURSES OF STUDY RECOMMENDED TO GRADUATE IN GEOLOGY, MINERALOGY, ECONOMIC GEOLOGY, PALEONTOLOGY, MINING, OR METALLURGY.

		STUDIES	Units	Geology	Mineralogy	Econ. Geol.	Paleontology	Mining	Metallurgy
FIRST YEAR	FIRST SEM.	Geography 1	3	+	+	+	+	+	+
		Geology 2	1	+	+	+	+	+	+
		English 2	2	+	+	+	+	+	+
		Engineering 1*a* & 1*b*	2	+	+	+	+	+	+
		Chemistry 1	2	+	+	+	+	+	+
		Applied Mathematics 1	5	+	+	+	+	+	+
	SEC. SEM.	Geology 1	2	+	+	+	+	+	+
		Physics 1	4	+	+	+	+	+	+
		Applied Mathematics 1	5	+	+	+	+	+	+
		Chemistry 1 & *a*	4	+	+	+	+	+	+
		English 2	2	+	+	+	+	+	+
SECOND YEAR	FIRST SEMESTER	Geology 3	2	+	+	+	+	+	+
		Paleontology 1	4	+	....	....	+	....	....
		Chemistry 6 & *b*	4	+	+	+	+	+	+
		Applied Mathematics 2	3	....	....	....	....	+	....
		" " 3	5	....	....	....	....	+	....
		Metallurgy 1	2	....	....	+	....	+	+
		" 2	2	....	....	+	....	+	+
		French 1 or German 1	3-5	+	+	+	+	....	+
	SECOND SEMESTER	Paleontology 2	4	+	+	+	+	....	....
		Chemistry *d*	3-4	+	+	+	....	+	+
		Mineralogy 1	3	+	+	+	+	+	+
		Applied Mathematics 2	3	....	....	....	....	+	....
		" " 3	5	....	....	....	....	+	....
		English 23	2	+	+	+	+	+	+
		French 1 or German 1	5	+	+	+	+	....	+
		Mechanical Engineering 11	2	....	....	....	....	+	+
THIRD YEAR	FIRST SEMESTER	Economic Geology 2	3	+	+	+	....	+	....
		Paleontology 3	2	....	....		+	....	....
		" 4	2	+	....	+	+		....
		Mineralogy 2	3	+	+	+	+	....	....
		Civil Engineering 4*a*	5	+	+	+	+	+	+
		Engineering 2	5	....	....	....	....	+	....
		Mining 1	2	....	....	+	....	+	+
		" 3	3	....	....	....	....	+	+
		Metallurgy 3	3	....	....	....	....	+	+
		Chemistry 2	3	....	+	+	....	....	+
		" *h*	2	....	....	....	....	....	+
		French 1 or German 1	3-5	+	+	+	+	....	....
		Spanish 1	3	+	....	+	....	+	....

		STUDIES	Units	Geology	Mineralogy	Econ. Geol.	Paleontology	Mining	Metallurgy
THIRD YEAR	SECOND SEMESTER	Economic Geology 3	3	+	+	+	....	+	+
		Geology 4	2	+	+	+	+	+	....
		Mining 2	2	....	....	....	....	+	+
		Paleontology 5	2	+	....	....	+	....	....
		Mineralogy 3	3	+	+	+	+	....	....
		Metallurgy 4	2	....	....	....	....	+	+
		“ 5	2	....	....	....	....	+	+
		“ *a*	3	....	....	....	....	+	+
		Chemistry 2	3	....	+	+	....	....	+
		“ 10	2	....	....	....	....	....	+
		Geology 5 & 6	9	+	+	+	+	+	....
		French 1 or German 1	3-5	+	+	+	+	....	....
		Spanish 1	3	+	....	+	....	+	....
FOURTH YEAR	FIRST SEMESTER	Geology 7	....	+	....	+	+	....	....
		Geology 8	....	+	....	....	....	....	....
		Paleontology 6	2-5	....	....	....	+	....	....
		Mineralogy 4	5	+	+	+	+	....	....
		Economic Geology 5	....	....	+	+	....	....	....
		Mining 3	3	....	....	....	....	+	....
		“ 5	3	....	....	....	....	+	....
		“ 7	2-5	....	....	....	....	+	....
		Metallurgy *d*	3-5	....	....	....	....	+	+
		“ *e*	2-8	....	....	....	....	....	+
		Chemistry 8	3	....	+	+	....	....	....
		“ *e*	4	....	+	....	....	....	....
		Mechanical Engineering 27	2	....	....	....	....	....	+
		“ “ 1*a*	3	....	....	....	....	....	+
	SECOND SEMESTER	Geology 7	....	+	....	+	....	....	....
		“ 8	....	+	....	....	....	....	....
		Paleontology 6	2-5	....	....	....	+	....	....
		Mineralogy 5	2-5	....	+	....	....	....	....
		Economic Geology 4	3	....	+	+	....	....	....
		“ “ 5	....	....	+	+	....	....	....
		Mining 4	3	....	....	....	....	+	+
		“ 6	3	....	....	....	....	....	....
		“ 7	2-5	....	....	....	....	+	....
		Metallurgy *b* or *c*	3	....	....	....	....	+	+
		“ *d*	2-8	....	....	....	....	....	+
		Chemistry 8	3	....	+	+	....	....	....
		“ *e*	4	....	+	....	....	....	....
		Electrical Engineering 1	4	....	....	....	....	+	+

GERMANIC LANGUAGES

George Hempl, James Owen Griffin, Professors.
Karl Gustav Rendtorff, William Alpha Cooper, Associate Professors.
Bruno Boezinger, Charlotte A. Knoch, Assistant Professors.
Charles Reining, Instructor.

The advanced courses are intended both for the maturer undergraduate and for candidates for the degrees of Master of Arts and Doctor of Philosophy. Special consideration is given to the needs of those who intend to make the teaching of German their profession. The Library facilities are good, and the collection is being rapidly strengthened in all directions. The private library of the late Professor Hildebrand furnishes valuable material, particularly in the older literature and in lexicography. In modern literature the Library offers good opportunities for advanced work, the Goethe collection being especially satisfactory. The files and the current numbers of most of the important journals are at hand.

Students who intend to teach German are expected to take at least courses 3, 6, 7, 8, 12, 13*b*, 14, 17, 22, and either 10 or 11. It is important that the student heed in time what is said in the note above course 10. The classes in elementary German, most of those in German 2*a* and 2*b*, those in German 5, 6, 7, 8, 9, 11, 12*b*, 18, 20, 26, and the practice section of German 14, are conducted in German.

1. Elementary.—It is the object of this course to put the learner in possession of the elements of the German language. This implies: (1) a personal command of simple German, that is, the ability to understand such German whether heard or read, and to employ the language in simple conversation, narration, and description, both orally and in writing; (2) such a ready familiarity with the elements of German grammar as is essential for the attainment of this command of the language.

5 units, both semesters. (Knoch, Reining)
MTWThF 8, 9, 10 (two sections).

[*Note.*—This course is the equivalent of two years of German in high school, and is open to all students who have not presented two or more units in German for entrance into the University. Students who present only one unit for entrance should take the second semester of this course.]

2. Second-year German.—(See note below.)

a. Reading.—Texts suitable for the second year; for the most part, the writings of contemporary authors.

3 units, both semesters (Griffin, Knoch, Reining)
MWF 8, 9, 11

b. Second-year Composition, oral and written.—The work of this course is intended to assist the pupil in getting a personal command of German, both spoken and written; with it is correlated a thorough review of the elements of the grammar. By composition is meant, not translation from English, but practice in putting one's thoughts into acceptable written German.

2 units, both semesters (BOEZINGER, REINING) TTh 8, 9

c. Scientific Reading.—Texts selected with a view to preparing scientific students to read technical literature. It is recommended that this course be not taken before the sophomore year.

3 units, both semesters (BOEZINGER) MWF 8, 11

[*Note.*—Courses 2*a* and 2*b* together are the equivalent of the third and fourth years of German in high school. Prerequisite: German 1, or two entrance units in German. Students who present three units in German for entrance should take the second semester of courses 2*a* and 2*b*. In exceptional cases, however, they may be permitted to register conditionally in courses 3 and 7 for the first semester.]

3. **Classical German Drama.**—This course aims chiefly to be an introduction to the spirit of the classical German drama; but throughout the course an effort is also made to familiarize the student, by means of various selected readings, with the life and character of the German people.

3 units, both semesters (GRIFFIN) MWF 8

4. **Modern German Drama.**—Lectures in connection with the interpretation and rapid reading of some of the more important works of the modern dramatists.

2 or 3 units, both semesters (GRIFFIN) TTh 8

5. **Modern German Novels.**—Rapid reading, without translation. Class discussions in German.

3 units, both semesters (COOPER) MWF 10

6. **Conversation.**

2 units, both semesters (KNOCH) Th 2:05-4:05

7. **Third-year Composition.**

2 units, both semesters (BOEZINGER) TTh 9

8. **Advanced Composition.**

2 units, both semesters (BOEZINGER) TTh 2:05

9. **Composition.**—This course is designed to follow course 8, and may be taken more than once for credit.

1 unit, both semesters (BOEZINGER) By arrangement

[*Note.*—Students wishing to take up either of the two following courses (10, 11) will be expected to have such preparation as can be obtained by pursuing courses 3 and either 4 or 5.]

10. Schiller.—Schiller's life and works. [See note above.]
3 units, both semesters (RENDTORFF) MW 8

11. Goethe.—Courses conducted in German. [See note above 10.]

a. Goethe's life and works.
3 units, both semesters (COOPER) MWF 9

b. Goethe's Faust: Urfaust, Fragment of 1790, Part First and Part Second.
3 units, both semesters (COOPER) [Not given in 1916-17.]

c. Goethe's Tasso.—Study of sources.
1st semester (COOPER) [Not given in 1916-17.]

12. Advanced German Grammar.—A systematic presentation of the important facts of German grammar, together with individual investigations of the usage of various writers.

a. Orthography, Phonology, and Morphology.
2 units, both semesters (HEMPL) TTh 1:05

b. Syntax. Inductive study of some of the more important topics. Course conducted in German.
2 units, 1st semester (COOPER) TTh 10

13. The History of German Literature.—Lectures and readings.

a. From the earliest times to the eighteenth century.
2 units, both semesters (RENDTORFF) TTh 8

b. The eighteenth and nineteenth centuries.
2 units, both semesters (RENDTORFF) [Not given in 1916-17.]

c. The Works of Gerhard Hauptmann
(RENDTORFF) [Not given in 1916-17.]

14. Teachers' Course.—Lectures on the various methods employed in teaching modern languages, together with practice in the conducting of classes. It is recommended that this course be taken the year before "Practice Teaching." Practice section conducted in German.
3 units, 2d semester (HEMPL, COOPER) M 1:05; F 2:05-4:05

15. The Genesis of Grammar.—Lectures on the origin and development of the parts of speech and of other grammatical apparatus.
2 units, 1st semester (HEMPL) WF 1:05

16. The Genesis of Writing. Lectures on the origin and development of writing, with special reference to European systems.
2 units, 1st semester (HEMPL) [Not given in 1916-17.]

17. Middle-High German.

a. Grammar and selected texts.
2 units, both semesters (RENDTORFF) TTh 9

b. Advanced Middle-High German.
2 units, both semesters (RENDTORFF) [Not given in 1916-17.]

18. Old-High German.
2 units, both semesters (BOEZINGER) [Not given in 1916-17.]

19. Old Norse.
2 units, 2d semester (HEMPL) [Not given in 1916-17.]

20. Gothic.
2 units, both semesters (BOEZINGER) [Not given in 1916-17.]

21. The Runes.—Lectures on the origin and development of primitive Germanic writing.
2 units, 1st semester (HEMPL) T 3:05-5:05

22. The History of German Civilization.—This course is intended for students of German who wish to become acquainted with the development of German civilization in its relation to German literature. Lectures with stereopticon.
2 units, both semesters (RENDTORFF) W 2:05-4:05

23. Thesis Course.—Special investigations and reports intended primarily to furnish undergraduates a training in preparation for original research work. Under the direction of the various members of the staff. Credit subject to individual adjustment.

26. Practice in Teaching.—A limited number of major students who have taken the German Teachers' Course may arrange for practice in teaching in connection with the work in German 1 and German 2. The course should be registered for as "Education 26." Course conducted in German.
4 units, either semester (COOPER) By arrangement

27. Phonetics.—Lectures and drill in general phonetics, for students of ancient or modern languages, including English.
2 units, 2d semester (HEMPL) By arrangement
[See also course 28 in the Department of Latin.]

GREEK

AUGUSTUS TABER MURRAY, Professor.
ERNEST WHITNEY MARTIN, Associate Professor.
[With the co-operation of Professor FAIRCLOUGH of the Department of Latin.]

UNDERGRADUATE COURSES

Instruction in the lower classes is given chiefly by means of recitations, but as the student advances these are supplemented by lectures.

In courses 1, 2, 3, 13, and 14 the work is arranged so as to provide as far as possible individual instruction for each student. In this way it has been found possible to read more widely, while at the same time there is a distinct gain in thoroughness.

The TEACHER'S RECOMMENDATION.—Courses 2, 3, 4, and 15 (or equivalents) constitute the minimum requirement for the high school teacher's recommendation in Greek.

1. **Elementary.**—Grammar; translation of easy prose; Greek composition. After the essential grammatical forms have been mastered, the students are led to read as widely as possible in simple narrative prose, including Xenophon's Anabasis, selections from the Gospels, and Cebes' Tablet. The course includes systematic drill in the ordinary forms of syntax, and exercises in writing Greek are regularly introduced. Two divisions.
3 to 5 units, both semesters (MARTIN, MURRAY)
MTWThF 9, 1:05

2. **Simple Attic Prose.**—Selections from prose writers, adapted to the needs of individual students. Open to those who have offered Greek for entrance, or who have completed course 1 in the University. Students who have completed course 14 may take this course on recommendation of the instructor. In this course each student meets regularly with one of the instructors for direct personal instruction.
3 units, 1st semester (MARTIN) MWF 9

2a. **The Iliad.**—A course parallel to course 2, and like it open to students who have completed course 1. The student is introduced to the study of Homer, and as much as possible of the Iliad is read.
3 units, 1st semester (MURRAY) MWF 10

3. **The Odyssey.**—A continuation of course *2a*, similarly conducted.
3 units, 2d semester (MURRAY) MWF 10

4. **Prose Composition.**—Systematic training in the writing of simple Greek with exercises in sight translation. Required of Greek major students in connection with courses 2 and 3.
2 units, 1st semester (MARTIN) TTh 9

7. **Modern Greek.**—Grammar, exercises, simple reading in current newspapers, etc. Wider reading in modern Greek literature and translations.
2 units, 2d semester (MARTIN) TTh 10

7b. **Modern Greek.**—A continuation of course 7.
1 unit, 1st semester (MARTIN)

8. Lucian.—Selections for rapid reading.
2 units, 1st semester (MARTIN)

9. The Greek Anthology.—Selections for rapid reading.
2 units, 2d semester (MARTIN)

11. Greek Tragedy.—The Prometheus Bound and Agamemnon of Aeschylus, with the Electra of Sophocles and several plays of Euripides, read and interpreted, with lectures on Greek dramatic art from time to time.
3 units, both semesters (MURRAY) MWF 2:05

13. Rapid Reading.—The student and instructor meet weekly for individual reading in easy Greek, suited to the student's particular needs. Open to all who have had at least one semester of Elementary Greek.
1 to 3 units, both semesters (MURRAY, MARTIN)
By arrangement

14. Introductory.—A rapid introduction to the Greek language, followed as soon as possible by the reading of the Gospel of John. Open to all students, and intended primarily for those who mean to take but a few courses in Greek.
3 units, 2d semester (MURRAY) MWF 1:05

15. Teachers' Course.—Lectures on methods and texts, with practice teaching.
2 units, 2d semester (MURRAY) By arrangement

16. Theocritus.—A study of the Idylls, with lectures on Alexandrian poetry.
2 units, 2d semester (FAIRCLOUGH)

GRADUATE COURSES

The center of the Graduate work is the Greek Seminary—made up of the director and such students as satisfy him of their fitness for the work. The Seminary meets weekly for the critical interpretation of some Greek author, the different members, in turn, filling the post of interpreter. Topics for investigation are assigned, and papers prepared by the members are read and discussed.

Members of the Seminary are expected to supplement their critical work by wide reading, and lectures on the author or authors under discussion are given by the director. It is in the highest degree desirable that all members of the Seminary should be able to read both French and German, and this is indispensable in the case of those who are candidates for the degree of Doctor of Philosophy.

17. The Greek Seminary.—In 1916-17 the Seminary was devoted to the study and interpretation of representative Greek Tragedies.
2 to 4 units, both semesters (MURRAY, MARTIN)

18. Rapid Reading.—In 1916-17 graduate and advanced students met regularly for the rapid reading of the Tragedies discussed in the Seminary.
2 to 4 units, both semesters (MURRAY, MARTIN)

SPECIAL COURSES

In addition to the above courses the following are given, intended primarily for general students. They do not presuppose a knowledge of Greek, and they do not count as part of the major work for students in Greek. The courses are open to incoming freshmen only with the consent of the lecturer.

19. The Greek Epic.
2 units, 1st semester (MURRAY) TTh 10

20. Greek Tragedy.
2 units, 2d semester (MURRAY) TTh 10

21. Greek Sculpture.—Lectures, illustrated with photographs and lantern slides, on the history and character of Greek sculpture.
2 units, 1st semester (FAIRCLOUGH) WF 11

22. Greek Literature.—Representative types, tracing the development of Greek literature, studied in English translations. Informal lectures from time to time.
3 units, 2d semester (MARTIN) MWF 11

23. New Testament Literature.—A critical introduction to the literature of the New Testament. Lectures, with assigned readings.
2 units, 1st semester (MURRAY) TTh 9

24. History of Greece.—A general outline course to the death of Alexander the Great. Lectures, with readings from the sources in translation. Open to all students.
3 units, 1st semester (MARTIN) MWF 8

25. Journal Club.
2 units, 2d semester (MARTIN) By arrangement

HISTORY

Ephraim Douglass Adams, Arley Barthlow Show, Edward Benjamin Krehbiel, Payson Jackson Treat, Professors.
Henry Lewin Cannon, Associate Professor.
Edgar Eugene Robinson, Percy Alvin Martin, Assistant Professors.
Yamato Ichihashi, Instructor.

The Teacher's Recommendation.—To obtain a Teacher's Recommendation in History the applicant must have completed, in a manner acceptable to the Department, three of the courses, 3, 4 (or 11 or 12), 5, 6, and 7, one advanced course (throughout one year), and the Teachers' Course in History (History 16). History majors may substitute for any one of the preceding elementary courses (3 to 7 inclusive) a year of Ancient History as offered by the Departments of Greek and Latin.

Journalism.—Students taking History as a major with the intention of preparing for journalism are referred to the heading "Journalism" on page 152.

Introductory Courses

1. **Historical Training Course.**—A practical course in the finding and handling of historical material. Required of, and limited to, first-year History majors.

1 unit, both semesters (Martin) T 11

[**History of Greece.**—See Greek 24.]

[**History of Rome.**—See Latin 30.]

[**Studies in Roman History.**—See Latin 29.]

3a. **The Early Middle Ages, 395-1095.**—A general course, open to all students.

3 units, 1st semester (Show) MWF 10

3b. **The Later Middle Ages, 1095-1492.**—A continuation of course *3a*. Open to all students who have had course *3a* or a satisfactory equivalent.

3 units, 2d semester (Show) MWF 10

4a. **English History to 1485.**—General outline course, open to a limited number of first-year students. (See course 12.)

3 units, 1st semester (Cannon) TThS 9

4b. **English History from 1485 to the present time.**—A continuation of course *4a*.

3 units, 2d semester (Cannon) TThS 9

5a. Modern European History, 1500-1715.—A general outline course. Not open to first-year students.
2 units, 1st semester (KREHBIEL) TTh 9

5b. Modern European History since 1715.—A continuation of course *5a.*
2 units, 2d semester (KREHBIEL) TTh 9

6a. American History, 1607-1760.—A study of the English colonization of the Atlantic Seaboard and of the westward movement of colonists of the British Empire. An introductory course open to students of all departments.
3 units, 1st semester (ROBINSON) MWF 10

6b. American History, 1760-1815.—A study of the Revolution and the Constitution. Particular attention is paid to western migration, the development of frontier areas, and the influence of the West on national affairs. A continuation of 6*a*.
3 units, 2d semester (ROBINSON) MWF 10

7a. United States History, 1815-1860.—Open to students who have had one course in history.
2 units, 1st semester (ADAMS) TTh 2:05-3:05

7b. United States History, 1860-1915.—A continuation of course 7*a*.
2 units, 2d semester (ADAMS) TTh 2:05-3:05

8a. History of Japan.—A survey of, and an attempt to interpret, the history of ancient and mediaeval civilization of Japan. Not open to first-year students.
3 units, 1st semester (ICHIHASHI) MWF 9

8b. History of Japan.—A critical examination of the more important phases of modern civilization of Japan (since 1600). Open to students who have had course 8*a*, and to others by special permission.
3 units, 2d semester (ICHIHASHI) MWF 9

9a. The Far East.—An account of the relations between Western nations and the peoples of Eastern Asia. The history of the Portuguese, Dutch, and British possessions in the Far East. Not open to first-year students.
3 units, 1st semester (TREAT) MWF 11

9b. The Far East.—China, Indo-China, Japan, the Philippines. Not open to first-year students.
3 units, 2d semester (TREAT) MWF 11

10a. History of Latin America.—An outline course dealing with the colonial expansion of Spain and Portugal in America and with the political, social, and industrial development of the leading republics of Latin America. Not open to first-year students.

2 units, 1st semester (MARTIN) TTh 8

10b. History of Latin America.—A continuation of course 10*a*.

2 units, 2d semester (MARTIN) TTh 8

INTERMEDIATE COURSES

11. English Constitutional History.—The course attempts to explain the development and operation of the present English constitution as well as to give the background for American constitutional history. Not open to first-year students.

2 or 3 units, both semesters (CANNON) TTh 8

12. English Narrative History.—An intensive course. Open to a limited number of other than first-year students.

4 units, both semesters (CANNON) TWThF 10

14a. Constitution of the Holy Roman Empire.—A critical study of select documents illustrative of German constitutional development from the twelfth to the eighteenth century; designed as an introduction to 14*b*. Open to juniors, seniors, and graduates.

2 units, 1st semester (SHOW) TTh 10

14b. Origins of the German Constitution.—A critical examination of the successive steps in the creation of the German imperial system, from the French Revolution (1790) to the adoption of the present Constitution (1871); based on direct study of the documents. Open to juniors, seniors, and graduates.

2 units, 2d semester (SHOW) TTh 10

15a. The French Revolution and Napoleon.—A lecture course. Supplemented by investigations and reports. Open to students who have had course 5*b*, or an equivalent.

3 units, 1st semester (KREHBIEL) MWF 9

15b. Europe Since 1815.—Political, social, and economic. With special reference to the formation of European alliances and alignments of the great Powers. Prerequisite: 5*b* or an equivalent.

3 units, 2d semester (KREHBIEL) MWF 9

16. Teachers' Course.—Lectures, recitations, and practice dealing with the problems of history teaching in elementary and secondary schools.

2 or 3 units, both semesters (SHOW) TTh 2:05-3:05

17a. The Westward Movement.—A survey of the expansion of the American people into the Mississippi Valley and the American occupation of California and the Pacific Northwest. Open to third- and fourth-year students who have a satisfactory knowledge of American History.

2 units, 1st semester (ROBINSON) TTh 10

17b. History of the Far West.—A study of the growth and development of the Trans-Mississippi Region; its political reorganization and its influence upon national and international affairs. Open to students who have taken 17*a*.

2 units, 2d semester (ROBINSON) TTh 10

18a. American and English Relations During the Civil War.—Use of British and American documentary material. Open to third-year students who have taken general courses in English and American history. The documents are selected by the instructor, and the course is intended to furnish training in the interpretation of documentary material.

3 units, 1st semester (ADAMS) MWF 11

18b. American and English Relations, since 1815.—Search for and selection of material on some assigned topic in diplomacy, with especial reference to the use of the United States documents and the British parliamentary papers.

3 units, 2d semester (ADAMS) MWF 11

19a. History of Brazil.—A somewhat detailed study of the History of Brazil up to the present time including a comparison of Brazilian political institutions with those of Spanish America and the United States. Open to those who have taken History 10 and to others with permission of the instructor.

3 units, 1st semester (MARTIN) MWF 11

19b. History of Mexico and California.—A somewhat detailed study of the History of Mexico up to the present time and the History of California up to 1848. Open to those who have taken History 10 and to others with permission of the instructor.

3 units, 2d semester (MARTIN) MWF 11

20. International Relations.—A course of lectures upon nationalism, the political, economic and cultural relations of states, the evolutionary forces of civilization in their relation to nationalism, and the projects for reducing war and substituting peaceful means of settling the differences of nations. Not open to first-year students.

3 units, 2d semester (KREHBIEL) MWF 11

21. Tropical Colonization in the Far East.—A study of the present methods of the English, Dutch, French, and American peoples in man-

aging tropical dependencies in the Far East. Open to students who have taken courses *9a* and *9b*.
2 units, 1st semester (Treat) T 2:05-4:05

22. History of Australasia.—An account of British colonization in Australia and New Zealand to the present time. Open to third-year students who have satisfactory knowledge of English history.
2 units, 2d semester (Treat) TTh 9

23. Governments of the Far East.—A study of the present governmental systems of China and Japan. Open to students who have taken course *9b*.
2 units, 2d semester (Treat) [Not given in 1916-17.]

24. History of California.—A study of available materials. Independent investigation. Open to students who have taken *17a*.
2 units, 2d semester (Robinson) [Not given in 1916-17.]

Advanced Courses

[Intended primarily for graduate students, but open to advanced undergraduates, with permission of their instructors.]

26. Seminary in Japanese History.—A study of the development of Japanese institutions, political, social, economic, and religious. Assignment of topic to each student and thesis required. Topic for 1916-17: Political Development of the Japanese.
2 units, both semesters (Ichihashi) By appointment

27. Mediaeval Institutions.—A practical study of select documents in the field of German constitutional history. Ability to read Latin and German is required.
2 units, both semesters (Show) By appointment

28. Seminary in the History of the West.—Subject for 1916-17: Political Parties in the West.
2 units, both semesters (Robinson) W 2:05-4:05

29. Seminary in English History.—Subject for 1916-17: Selected topics; chiefly those relating to present-day problems.
2 units, both semesters (Cannon) By appointment

30. Seminary in Latin American History.
2 units, both semesters (Martin) By appointment

31. American Diplomatic History since 1815.—Open to students who have had course 18, and to others by special permission. Thesis required.
3 units, both semesters (Adams) M 2:05-4:05

32. Seminary in Modern European History.—Subject: International Joint Action ~~in~~ the Nineteenth Century.
2 units, both semesters (KREHBIEL) W 2:05-4:05

33. Seminary in the History of American California.
2 units, both semesters (ROBINSON) [Not given in 1916-17.]

35. Seminary in American-European Relations in Nineteenth Century.—Assignment of topic to each student and thesis required.
2 units, both semesters (ADAMS) By appointment

36. Seminary in the History of the Far East.—Open to students who have had course *9b*.
2 units, both semesters (TREAT) M 2:05-4:05

LATIN

HENRY RUSHTON FAIRCLOUGH, Professor.
JEFFERSON ELMORE, BENJAMIN OLIVER FOSTER, Associate Professors.
MARY WEBSTER KRAEMER, KATHARINE LUMMIS, Assistants in Instruction.

[With the co-operation of Professor HEMPL of the Department of Germanic Languages.]

UNDERGRADUATE COURSES

The aim of the undergraduate courses in Latin is to give the student a somewhat systematic knowledge of the language and its development, an acquaintance with the representative authors of Latin literature, and some insight into the life, culture, and civilization of ancient Rome.

The Department recognizes two classes of major students: (1) those who wish to pursue a course of liberal studies, including Latin as a prominent feature; (2) those who, expecting to teach Latin, desire to be properly equipped for that purpose.

Students who wish to qualify for teaching Latin must take courses 3, 4, 6, 7, 8, 9, 10, 11, and 17, together with such other courses as are recommended by the Department. To other students more freedom of choice is allowed.

1. Introductory.—The course is given for students who desire at least one year of Latin and for those who wish to begin the subject with a view to further study.
3 units, both semesters (KRAEMER) MWF 2:05

2. Cicero and Virgil.—Cicero, selected orations; Virgil, selected books of the Æneid. This course is planned for those who have passed in course 1 or entrance subject *8a*.
3 units, both semesters (LUMMIS) MWF 11

3. **Terence and Cicero.**—Terence, Andria; Cicero, De Senectute. In addition to the study of these Latin texts, the course includes instruction on the general character and development of Roman literature. Open in either semester to students who have completed course 2, or who have offered entrance subject *8b*. Two sections.
3 units, 1st semester (FOSTER) MWF 8, 9

4. **Catullus and Horace.**—Selections from Catullus; Horace, Odes and Epodes. A course complementary to course 3. Two sections.
3 units, 2d semester (FOSTER) MWF 8, 9

5. **Legal Latin.**—The Institutes of Gaius or Justinian are read both as a training in language and as an introduction to the main principles of Roman law. The course is useful to all who desire a first-hand knowledge of Roman law and of the origins of European social institutions. Open to any students who have had three years of Latin.
2 units, both semesters (FAIRCLOUGH) TTh 10

6. **Prose Composition I.**—Practical exercises and rapid reading of easy prose. Open in either semester to first-year students.
2 units, both semesters (FOSTER, ELMORE) TTh 9

7. **Horace.**—Satires and Epistles. Open to those who have completed courses 3 and 4, or an equivalent. Attention is directed especially to the style and subject matter, to Horace's influence on later literature, and to the salient features of the Augustan age.
3 units, 1st semester (FAIRCLOUGH) MWF 10

8. **Livy and Tacitus.**—Selections from Livy's History; the Agricola of Tacitus. This course, complementary to course 7, involves a survey of Roman history and the literature of the early empire.
3 units, 2d semester (ELMORE) MWF 10

9. **Oral Latin.**—Practice in speaking and in the direct method of teaching.
2 hours, 1 unit, 2d semester (FOSTER) TTh 9

10. **Roman Comedy.**—The Trinummus and the Captivi of Plautus, and either the Menaechmi or Terence's Hauton Timorumenos. Attention is paid to early forms, constructions, and meters, and to the staging of a Roman play, with some consideration of the later history of comedy.
2 units, 1st semester (FOSTER) TTh 8

11. **The Letters of Cicero.**—Selections from the correspondence are read with a view to obtaining a conception of Cicero's character as a

man and to becoming acquainted, as far as possible, with the social and political conditions of the time.
2 units, 2d semester (FOSTER) TTh 8

12. **Lucretius.**—Selections from the De Rerum Natura are read with particular attention to the philosophic thought and its poetic treatment.
3 units, 1st semester (FOSTER) [Not given in 1916-17.]

13. **Prose Composition II.**—An advanced course, suitable for those who expect to teach Latin.
1 unit, 2d semester (FAIRCLOUGH) T 11

14. **Juvenal and Martial.**—Selections from the Satires of Juvenal and the Epigrams of Martial, with supplementary reading in other writers of the first century.
2 units, 1st semester (FAIRCLOUGH) W 1:05-3:05

16. **Quintilian.**—Book X. Rhetoric and literary criticism among the Romans, with a survey of Greek and Roman literature.
2 units, 2d semester (FAIRCLOUGH) WF 9

17. **Teachers' Course.**—Lectures on methods of teaching Latin, with practical exercises. Open only to advanced students.
2 units, 2d semester (ELMORE) M 2:05-4:05

GRADUATE COURSES

These courses are open to graduates in Latin, and are most profitable to those who have had some undergraduate work in Greek. The ability to read French and German is also very desirable, and, in the case of candidates for the degree of Ph.D., necessary. The aim of the course is to give the student a thorough grasp and detailed knowledge of particular authors, and of certain periods and fields of literary activity, as well as a training in literary criticism, and an acquaintance with the methods of original research.

22. **Latin Seminary.**—In 1916-17 the Seminary will be devoted to Horace and Lyric Poetry. All of Horace's poems will be read, and selected passages interpreted. Attention will be paid both to Greek exemplars and to Horace's influence on later literature. Students should provide themselves in advance with a complete text of Horace, such as that in the Oxford or Teubner series.
2 to 6 units, both semesters (FAIRCLOUGH) F 2:05-4:05

23. **Caesar.**—The Gallic and Civil Wars. Readings and reports. Intended for prospective teachers.
2 units, both semesters (FOSTER) W 3:05-5:05

25. Introduction to Latin Palaeography.—Lectures and practice in reading facsimiles of manuscripts.
1 unit, 1st semester (FOSTER) T 2:05

26. Introduction to Latin Epigraphy.—Lectures and readings in Latin inscriptions.
1 unit, 2d semester (FAIRCLOUGH) T 11

28. Etruscan.—Lectures on the nature of the language and its relation to other Italic dialects.
2 units, 2d semester (HEMPL) T 1:05-3:05

29. Studies in Roman History.—This advanced course takes up the consideration of special problems. Open by permission of the instructor to those who have had Latin 30 or an equivalent.
2 units, 1st semester (ELMORE) [Not given in 1916-17.]

SPECIAL COURSES

30. History of Rome.—A general course, open to all students.
3 units, 2d semester (ELMORE) MWF 8

31. Roman Art and Archaeology.—A survey of the topography, architecture, sculpture, and other art-forms of ancient Rome, illustrated with lantern-slides. This course is open to all, but first-year students must receive special permission from the instructor before registering.
2 units, 2d semester (FAIRCLOUGH) [Not given in 1916-17.]

34. Journal Club.—Advanced students will meet once or twice a month for a consideration of articles appearing in current periodicals.
1 unit, 2d semester (FAIRCLOUGH)

LAW

CHARLES ANDREWS HUSTON, ARTHUR MARTIN CATHCART, JOSEPH WALTER BINGHAM, CLARKE BUTLER WHITTIER, CHESTER GARFIELD VERNIER, Professors.

MARION RICE KIRKWOOD, Associate Professor.

THOMAS ARMITAGE LARREMORE, Instructor.

*SAMUEL WATSON CHARLES, [2]HENRIE GRANVILLE HILL, OSCAR KENNEDY CUSHING, Lecturers.

THE LAW SCHOOL

The Law School was established, as a department of the University, in 1893. Its purpose is to provide a thorough legal education for students who are fitted by their maturity and their previous academic training to pursue professional study under university methods of instruction. The curriculum covers three academic years and constitutes an adequate preparation for the practice of law in any English speaking jurisdiction. Elective courses in Code Pleading and in California Practice are offered, and graduates of this school are admitted to the California Bar without examination. A comprehensive group of courses in Public Law, of value not only to the law student but to the student who contemplates entering the diplomatic, consular, or other government service, is a feature of the curriculum.

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*Deceased December 11, 1916.

Only college graduates and students who have completed two years of work in the pre-legal curriculum of this University, or its equivalent, are admitted as regular students. Under certain conditions persons over twenty-three years of age who are eligible for admission to the University as regular students may be admitted to the Law School as unclassified students, not candidates for a degree.

THE LIBRARY

The Law Library contains 21,000 volumes, including complete sets of the English, Irish, Scotch, Australian, and Canadian reports, the reports of all Federal courts, a practically complete set of the reports of the American States, the Australian States, and the Canadian Provinces, the National Reporter system, the standard collections of cases, the standard English and American legal encyclopedias, the principal American, English, and Canadian digests and citators, sets of the leading American, British, Canadian, and Continental legal periodicals, together with a good collection of text-books. There is also a somewhat complete collection of compiled laws, session laws, and other statutory material both Federal and State, as well as British, Canadian, and Australian.

The class of 1911, upon graduation, adopted a plan for the purchase, from time to time, of works on Legal History. This collection is known as the "Class of 1911 Memorial Collection on Legal History." The class of 1912 adopted a similar plan for the purchase of a collection of celebrated trials to be known as "The Class of 1912 Memorial Collection of Celebrated Trials."

Through the generosity of Justice McFarland, and later of Justices Melvin and Sloss, the library has received, since 1907, a complete set of the records of the California Supreme Court and the District Courts of Appeal.

The University Libraries are also available for use by students of the Law School.

ADMISSION TO THE LAW SCHOOL

Admission to the professional curriculum in law is granted to students duly enrolled in the University, as follows:

I. To students who have received the degree of Bachelor of Arts, or an equivalent degree, from this University or some other institution of recognized collegiate rank.

II. To students who have received credit for two years of work in the pre-legal curriculum offered by this University, or the substantial equivalent thereof in some other institution of recognized collegiate rank.

III. In the discretion of the Faculty of Law, to students over twenty-three years of age who cannot meet the foregoing requirements, but who are eligible for admission to the University as regular students. Such students are termed "unclassified," and are given a certificate in lieu of the degree conferred upon regular students.

ADMISSION TO THE BAR

It is provided by Section 280*b* of the California Code of Civil Procedure, that any person producing evidence of having satisfactorily completed the three years' course of law study prescribed by this Law School, shall be entitled to a license to practice law in all the courts of the State, subject to the right of the chief justice of the Supreme Court to order an examination, as in ordinary cases of applicants without such evidence. The certificate required by the statute will be issued, upon request, to any regular or special student who shall have received an aggregate of 75 units of credit in the Law School, including credit in Pleading and California Practice and excluding credit in the course in Introduction to the Study of Law, and who, in addition thereto, shall have received credit in the course in English Composition (English 2).

INSTRUCTION IN PRACTICE

A special effort is made to impart to the student a thorough knowledge of the rules of procedure and practice, and to enable him to acquire a creditable degree of skill and facility in the application of such rules to conditions of actual litigation. To these ends, courses are offered in Common Law and Code Pleading, and in California Practice. In the last-mentioned course particularly, the student is afforded practical experience in the commencement of actions, the preparation of pleadings, the trial of issues of fact, and the argument of questions of law.

MOOT COURT

A Moot Court, for the argument of questions of law, is conducted by the Faculty. Sessions are held twice a week throughout the second semester, and the work is open to second- and third-year law students.

ORDER OF THE COIF

A chapter of the Order of the Coif, a national law school honor society, founded to encourage scholarship and to advance the ethical standard of the legal profession, was established in the law school in 1912. In the second semester of each year, such third-year law students as are deemed worthy of the distinction, selected from the ten per cent of the class ranking highest in scholarship, are elected to membership.

PRE-LEGAL CURRICULUM

For undergraduate students who enter with the intention of preparing for the study of law, a pre-legal curriculum is offered by the University under the direction of the Faculty of the Law School. This curriculum ordinarily occupies four years and requires that the student obtain 120 units of university credit. The equivalent of three years is given to general culture studies (for instruction in which no tuition is charged) and of one year to the professional study of law.

In electing courses in general culture subjects it is expected that 40 units will be applied as follows: To English Composition, 4; to a language or languages other than English, 12; to English and American History, or either, 9; to Economics, 6; to Mathematics and Logic, or either, 6 (six units of Physics or Chemistry, including laboratory work, may be substituted); to Introduction to the Study of Law, 3.

Students who satisfactorily complete the full pre-legal curriculum are granted the degree of Bachelor of Arts by the University, and by reason of having had one year of law study as undergraduates may satisfy the requirements for the degree of Juris Doctor by two years of graduate law study.

Students who satisfactorily complete the first two years of the pre-legal curriculum, including the 40 units specified above, may enter the law school as candidates for the degree of Bachelor of Laws.

LAW SCHOOL CURRICULUM

The work of the first year in the Law School is prescribed. The work of the second and third years is elective, but the courses in Administrative Law, Conflict of Laws, Constitutional Law, Private Corporations, Municipal Corporations, Evidence, and California Practice may not be taken, ordinarily, before the third year.

The courses offered in the Law School are as follows:

Preliminary Course

[Open to students of all departments who have 25 units of credit, and required of pre-legal students.]

1. Introduction to the Study of Law.—Nature, sources, and sanction of law; outline of the historical development of English and American courts and procedure; the content, classification, and determination of rules of law, including a consideration of legal rights and duties, the doctrine of *stare decisis* and the development of some of the more elementary rules of law by combining and comparing decisions; use of law books and the law library. Selected readings and cases.

3 units, 2d semester (Kirkwood) MWF 11

First-Year Courses

2. Contracts.—The formation of contracts: offer and acceptance; consideration; contracts under seal. Parties affected by contracts: contracts for the benefit of third persons; assignments; joint and several contracts. The Statute of Frauds. The performance of contracts: express and implied conditions; impossibility of performance. Illegal contracts. Discharge of contracts. Williston, Cases on Contracts, and selected California cases.

3 units, both semesters (Whittier) MWF 10

3. Torts.—Trespass to person, to real property, and to personal property; excuses for trespass; conversion; legal cause; negligence; contributory and imputed negligence; plaintiff's illegal conduct as a defense; duties of land-owners; hazardous occupations; liability for animals; deceit, defamation, slander, libel, privilege, malice; malicious prosecution, criminal and civil; interference with social and business relations, inducing breaches of duty, fair and unfair competition, strikes, boycotts, business combinations. Ames and Smith, Cases on Torts.

5 units, 1st semester (Cathcart) MTWFS 9

4. Criminal Law.—Nature and sources of criminal law; crime as an act; attempts; criminal intent; circumstances affecting illegality of act; specific offenses; crimes against the person, larceny and allied offenses, crimes against the dwelling-house, conspiracy. Beale, Cases on Criminal Law (2d ed.).

4 units, 1st semester (Vernier) TWFS 8

5. Introduction to Property.—Distinction between real and personal property. Real property: tenures; estates, nature, kinds, creation, and transfer; rights in another's land, natural rights, easements,

covenants running with the land, public rights, franchises, rents. Gray, Cases on Property, Vol. II (2d ed.), and selected cases.
5 units, 2d semester (KIRKWOOD) MTWFS 9

6. **Agency.**—Nature of relation; appointment; liabilities of principal for agent's torts, contracts, crimes; liabilities of agent; parties to writings; undisclosed principal doctrines; delegation of agency; termination; ratification. Wambaugh, Cases on Agency.
4 units, 2d semester (HUSTON) MWFS 8

SECOND- AND THIRD-YEAR COURSES

7. **Constitutional Law.**—Nature and sources of American constitutional law; adoption and amendment of constitutions; separation of powers; power of judiciary to declare acts of the legislative and executive branches of government unconstitutional; citizenship; privileges and immunities of citizenship; due process of law; police power; eminent domain; taxation; ex post facto and retroactive laws; laws impairing the obligation of contracts; regulation of commerce; money; war; government of territories. Open to third-year law students and to well-prepared fourth-year students in history, economics, and political science. Hall, Cases on Constitutional Law.
4 units, 2d semester (CATHCART) MWFS 9

8. **Administrative Law and Public Officers.**—Administrative regulations; jurisdiction, discretion, adjudication; enforcement of orders; habeas corpus; mandamus; certiorari; equitable jurisdiction in public law. Freund, Cases on Administrative Law.
3 units, 1st semester (HUSTON) [To be given in 1917-18.]

9. **Municipal Corporations.** Nature; creation, alteration, and dissolution; internal organization; powers; liabilities on contract and for torts; remedies. Beale, Cases on Municipal Corporations, and selected California cases.
3 units, 2d semester (HUSTON) MWF 10

10. **International Law.**—International Law defined and distinguished from Municipal Law. International relations in time of peace: definition, recognition, and classification of states; effect of change of sovereignty; jurisdiction on land and on the high seas; nationality. International relations as modified by war; measures short of actual war; effects of war as between enemies; relations between belligerents and neutrals. Open to all law students and to advanced students in other departments. Scott, Cases on International Law.
3 units, 2d semester. (LARREMORE) [Not given in 1916-17.]

11. Conflict of Laws.—The principles and rules of "private international law" determining the extent to which the domestic system of law adopts and applies provisions of foreign systems in cases involving extraterritorial factors; more especially (1) nature and effect of domicile and nationality; (2) jurisdiction of courts in proceedings *in personam,* proceedings *in rem,* and proceedings for *divorce;* (3) respective applicability and effect of domestic laws and foreign laws in relation to marriage and other domestic relations; contractual, quasi-contractual, delictual, and judgment obligations; the creation, transfer, taxation, devise, and inheritance of all forms of property interests. Beale, Shorter Selection of Cases on Conflict of Laws.

3 units, 1st semester (BINGHAM) [Not given in 1916-17.]

12. Admiralty.—Admiralty jurisdiction, basis; maritime contracts, torts, and crimes; maritime liens, ex contractu, ex delicto, priorities, discharge; bottomry and respondentia obligations; salvage; general average. Ames, Cases on Admiralty.

2 units, 1st semester (KIRKWOOD) [To be given in 1917-18.]

13. Introduction to Comparative Law.—A comparative study of some leading conceptions of the Roman Law, and its modern developments in the Civil Law of Continental Europe and America, with the related conceptions of the Anglo-American Common Law. Required reading.

3 units, 1st semester (HUSTON) [Not given in 1916-17.]

14. Title to Land I: Possession and Landlord and Tenant.—Nature and importance of legal possession; remedies to recover legal possession wrongfully withheld; effect of statutes of limitations; tacking of periods of successive adverse possessions; actual occupation as element of title to legal possession; "constructive" adverse possession under color of title; intent as element of title to legal possession; possession through occupation of a servant or agent; possession through occupation of a tenant; relationship of landlord and tenant compared with rights and liberties of persons in various other relations; possession through a co-tenant's occupation; exceptions and interruptions to running of statutes of limitations. Creation of relationship of landlord and tenant; duration of tenant's interest; remedies of landlord for non-performance of tenant's obligations; remedies of tenant against landlord; covenants running with the land between landlord and tenant; rights, liberties, and duties of landlord and tenant with respect to third persons. Gray, Cases on Property (2d ed.), Vol. III; and selected cases and statutes.

3 units, 1st semester (BINGHAM) MWF 8

15. Title to Land II: Conveyances.—Accretion; prescription; creation of interests in land by agreement or conveyance; methods of transfer of interests in land at common law and under statutes; execution of deeds; interpretation of instruments of conveyance; covenants for title; conditions; fraudulent conveyances; recording. Prerequisite, course 5. Gray, Cases on Property (2d ed.), Vols. III and VI; and selected cases and statutes.
3 units, 2d semester (BINGHAM) MWF 8

16. Wills.—Acquisition of property on the death of former owner, escheat, descent, occupancy, gifts, *mortis causa,* the making, revocation, and republication of wills, ademption and lapse of legacies. Prerequisite, course 5. Gray, Cases on Property, Vol. IV (2d ed.), and selected cases.
3 units, 1st semester (BINGHAM) [To be given in 1917-18.]

17. Future Interests.—Vested and executory interests; construction of language creating future interests; powers; rule against perpetuities; provisions for forfeiture and restraints on alienation. Prerequisite: courses 7 and 15. Gray, Cases on Property, Vol. V and part of Vol. VI (2d ed.), and selected cases and statutes.
4 units, 1st semester (BINGHAM) [To be given in 1917-18.]

18. Water Rights and Irrigation Law.—A course in the intensive study of the law of water supply rights, with especial reference to water rights in the Western States. Bingham, Cases on Water Rights.
3 units, 1st semester (BINGHAM) . TThS 8

19. Mining Law.—A course on mining titles under the Federal mining acts, with especial reference to mining rights in the Western States and Alaska. Costigan, Cases on Mining Law; and legislative enactments.
2 units, 1st semester (BINGHAM) MW 11

20. Persons and Domestic Relations.—Parent and child; custody, support, services, and earnings of child; relations as to torts; adoption. Infants: period of infancy; infants' contracts and conveyances, torts, and crimes. Husband and wife; rights of husband as to wife's property; rights of each as to earnings, services, and society of the other; husband's interest in damages for tort to wife; husband's liability for torts or contracts of wife; husband's duty to support wife and wife's authority to bind husband by her contracts; married women's contracts, conveyances, and devises; estoppel of married women; liability of married women for torts and responsibility for crimes; contracts, conveyances, and suits between husband and wife; husband's right to custody of wife. Marriage: promise to marry and breach; marriage as a contract or relation; annulment; divorce; separation. Kales, Cases on Persons and Domestic Relations, and Vernier, Cases on Marriage and Divorce.

3 units, 1st semester (LARREMORE) MW 9, S 11

21. Quasi-Contracts.—Origin and nature of quasi-contracts: Benefits conferred in misreliance on right or duty; general principles; misreliance resulting from mistake of law; misreliance on invalid contract, on contract unenforceable because of Statute of Frauds, on illegal contract, on contract impossible of performance, on contract unenforceable because of breach, on supposed requirement of valid contract, on non-contract obligation, on ownership of property: Benefits conferred through dutiful intervention in another's affairs: Benefits conferred under constraint; constraint of duress, of legal proceedings, of tax or assessment: Action for restitution as alternative remedy for breach of contract and for tort. Woodruff, Cases on Quasi-Contracts.

3 units, 1st semester (CATHCART) [To be given in 1917-18.]

22. Public Utilities.—The nature, rights, and duties of public service callings; railroads and canals; telephone and telegraph; gas, water, irrigation, and other public utilities. Burdick, Cases on the Law of Public Service.

2 units, 1st semester (CATHCART) MW 11

23. Bailments and Carriers.—Bailments in general, including bailments for hire, for services to be performed, and for hired use. Special classes of bailments involving ordinary liability: pledges; warehousemen. Special classes of bailments involving exceptional liability: innkeepers; common carriers of goods; common carriers of passengers. Green, Cases on Bailments.

3 units, 1st semester (LARREMORE)

24. Sales.—Subject matter of the contract; transfer of property and title; destruction of the goods and risk of loss; obligations of seller and buyer; rights of unpaid seller against the goods; remedies of the seller on the contract; remedies of the buyer on the contract; Statute of Frauds. Woodward, Cases on Sale.

4 units, 2d semester (VERNIER) [To be given in 1917-18.]

25. Bills and Notes.—Negotiability; form and inception, form of bill and of note, acceptance, delivery, consideration; negotiation, transfer, holder in due course; liability of parties, maker and acceptor, drawer and indorser, transferror; discharge; effect of the Negotiable Instruments Law and California statutes. Case book to be announced.

4 units, 1st semester (VERNIER) MWFS 9

26. Partnership.—Nature of a partnership, its purposes, and members; creation of partnerships; nature of partner's interest; firm name and good will; mutual rights and duties of partners; actions between partners, at law and in equity; powers of partners; liability for acts of partners in contract and tort; general liability of partners; dissolution and notice; consequences of dissolution; dissolution agreements respecting debts; distribution of assets to creditors, and between partners; limited partnerships. Burdick, Cases on Partnership.
3 units, 2d semester (LARREMORE) TThS 8

27. Private Corporations.—The nature of a corporation; the formation and organization of corporations; irregular incorporation; corporate powers; ultra vires; promoters; directors; shareholders; creditors; stock issue and payment, transfer. Open to third-year law students only. Warren, Cases on Corporations (2d ed.), and selected California cases.
4 units, 1st semester (HUSTON) TThFS 9

28. Insurance.—Marine, fire, and life insurance. Insurable interest in various kinds of policies; concealments; misrepresentations; warranties and other matters affecting the validity of the contract; amount of recovery; subrogation; waiver, estoppel, election; powers of agents; assignees and beneficiaries.
2 units, 1st semester (HUSTON) TF 11

29. Suretyship.—Personal suretyship compared with real suretyship (mortgages, pledges, liens, etc.); suretyship obligations compared with insurance and indemnity obligations; guaranty and other forms of suretyship in relation to the Statute of Frauds; suretyship in transactions involving negotiable instruments; fidelity contracts and judicial bonds; surety's defenses due to original defects in his obligation or to its subsequent discharge; surety's right to subrogation, indemnity, contribution, or exoneration; creditor's right to surety's securities. Ames, Cases on Suretyship.
3 units, 2d semester (VERNIER) MT 9, W 2:05

30. Mortgages.—All forms of mortgage security, both real and chattel; essential elements of legal and equitable mortgages; legal and equitable rights, powers and remedies of mortgagor and mortgagee with respect to title, possession, rents and profits, waste, collateral agreements, foreclosure, redemption; priorities; marshaling; extension of mortgages; assignment of mortgages; discharge of mortgages. Kirchwey, Cases on Mortgage.
2 units, 2d semester (VERNIER) [To be given in 1917-18.]

31. Equity I: Contracts and Torts.—Historical development of equity; relation between equitable rights and powers and legal rights and powers; jurisdiction, procedure, and remedies of courts of equity; specific performance of contracts, with emphasis on the special trust relations between vendors and purchasers of realty; specific prevention and specific reparation of torts, including waste, trespass, nuisance, infringement of patents and copyrights, interference with business relations, violation of rights of privacy. Case book to be announced.

4 units, 1st semester (KIRKWOOD) TThFS 9

32. Equity II: Trusts.—The Anglo-American system of uses and trusts. The creation, the transfer and the extinguishment of all forms of trust interests, express, resulting, and constructive; priorities between competing equities; the construction of trust dispositions; the special doctrines of charitable trusts. Ames, Cases on Trusts (2d ed.).

4 units, 2d semester (BINGHAM) MWF 11, T 2:05

33. Equity III: Interpleader, Bills of Peace, etc.—Special equitable remedies, including: interpleader; bills of peace and *quia timet;* cancellation of contract; clouds on title; perpetuation of testimony; rights of future enjoyment; reformation and rescission of contract for mistake. Case book to be announced.

2 units, 1st semester (KIRKWOOD) [Not given in 1916-17.]

34. Damages.—Respective functions of court and jury in estimating damages; exemplary, liquidated, nominal, direct, and consequential damages; avoidable consequences; counsel fees; certainty, compensation, damages for non-pecuniary injuries; value; interest; and damages in certain actions of tort and contract. Beale, Cases on Damages (2d ed.).

2 units, 2d semester (LARREMORE) T 11, W 1:05

35. Bankruptcy.—Jurisdiction of the United States and the several States; who may be a bankrupt; who may be petitioning creditors; acts of bankruptcy; what property passes to the trustee; provable claims; duties and powers of the bankrupt and his trustee; protection, exemptions, and discharge. Williston, Cases on Bankruptcy.

3 units, 2d semester (VERNIER) TWS 9

36. Common Law Pleading.—The principal forms of action, including their scope and the necessary allegations and methods of pleading defenses in each; demurrers, general and special; traverses and pleas in confession and avoidance; dilatory pleas; amendments; motions based on the pleadings. Whittier, Cases on Common Law Pleading.

3 units, 1st semester [Not given in 1916-17.]

37. Code Pleading.—The civil action; parties; splitting and joining actions; the complaint, including the facts constituting the cause of action, the methods of stating them, and the prayer for relief; the answer, including general and specific denials, affirmative defenses and counterclaims; the demurrer; the reply; motions; bills of particulars; amendment and aider; construction of pleadings. Prerequisite: course 36. Selected cases.

3 units, 2d semester (CATHCART) MWF 11

38. Evidence.—Judicial notice; presumptions and burden of proof; functions of court and jury; conjectural evidence; character evidence; hearsay and the exceptions to its exclusion; opinion; real evidence; writings, including authorship, proof of contents, "parol evidence rule" and construction; witnesses, including competency, privilege, examination, impeachment, and rehabilitation. Open to students having 31 units of credit in law. Thayer, Cases on Evidence (2d ed.).

3 units, both semesters (WHITTIER) TThS 10

39. California Practice.—Organization and jurisdiction of courts; court records and files; proceedings prior to judgment, including: service and return of summons and motions relating thereto, appearances, provisional remedies, such as attachments, arrest, etc., *lis pendens*, the trial, exceptions and findings, verdict; the judgment, its entry and satisfaction; proceedings subsequent to judgment, including: stay of execution, costs, execution, motion for new trial, appellate proceedings; probate and administration proceedings; special proceedings, including writs of certiorari, mandamus, and prohibition; introduction to jurisdiction and procedure of Federal courts. Prerequisite, course 37. Open to students having 31 units of credit in law. California Code of Civil Procedure; also selected California cases.

2 units, both semesters (CHARLES, HILL) TTh 1:05

40. Moot Court.—

A. Instruction in Legal Bibliography and the use of law books.

B. Argument of cases on submitted statements of facts; briefs; preparation of opinions.

2 units, 2d semester (LARREMORE) M 1:05, Th 2:05

SPECIAL LECTURES

In addition to the regular professional courses, a few special lectures, most of them of a practical character, are given each year by experienced lawyers of the California Bar.

COURSES IN OTHER DEPARTMENTS

Courses offered by other Departments of the University are open to pre-legal and law students. Of special interest and importance are the course in the Institutes of Justinian, in the Latin Department, the courses in Constitutional History, in the History Department, and various courses in Economics and Political Science.

THE SUMMER TERM

The primary purpose of the Summer Term is to enable law students, in this and other schools, to shorten materially the period of preparation for the bar, attendance at two summer terms making it possible to complete the three years' law curriculum in two and one-half calendar years. Incidentally, however, an opportunity to obtain systematic university instruction in law is afforded other persons of adequate training.

The Summer Term for the year 1916 opened Monday, June 19th, and continued for six weeks, closing Saturday, July 29th.

The following courses were given:

2a. Contracts.—Course 2 in the regular curriculum, somewhat abridged.

5 units (WOODWARD)

20a. Persons and Domestic Relations.—Identical with course 20 in the regular curriculum.

3 units (LARREMORE)

31a. Equity I.—Identical with course 31 in the regular curriculum.

4 units (KIRKWOOD)

34a. Damages.—Identical with course 34 in the regular curriculum.

2 units (CATHCART)

37a. Code Pleading.—Identical with course 37 in the regular curriculum.

2 units (CATHCART)

40a. Moot Court.—Course 40 in the regular curriculum, abridged.

1 unit (LARREMORE)

The above courses are open to all students who are qualified for admission to the regular law school curriculum, except that for admission to Damages and Moot Court a knowledge of Contracts and Torts is required.

The tuition fee for the summer term is twenty-five dollars. In addition there is a syllabus fee of fifty cents for each course. No other fees are charged.

UNIVERSITY LIBRARY

George Thomas Clark, Librarian.
Charles V. Park, Assistant Librarian.
Helen Binninger Sutliff, Chief Cataloguer.
Alice Newman Hays, Reference Librarian.
Elizabeth Hadden, Chief of Order Department.
Lucia May Brooks, Chief of Serial Department.
Louise Ophüls, Medical Librarian.
Thomas Lafayette Dyer, Law Librarian.

The Library is open during term time on week days from 8 a.m. to 10 p.m., except on Saturdays, when it is closed at 5 p.m. During vacations the hours are from 8:30 a.m. to 4:30 p.m., Saturdays to 12:30 p.m. The shelves are open to members of the faculty, and to students engaged in advanced work upon the recommendation of their instructors. Books, other than works of reference, not required for class use, are lent for a period of two weeks.

Including the departments of Law and Medicine the Library contains upward of 284,000 volumes. The income of the Jane Lathrop Stanford Jewel Fund, certain other special funds, and fees provide amply for its maintenance and growth. Noteworthy special collections are as follows:

The Jordan Library of Zoology.—A collection consisting largely of works on ichthyology, to a considerable extent made up of a vast number of authors' separates, which have been accumulated by Chancellor Jordan, bound in convenient form, indexed, and catalogued. The more voluminous publications, such as the works of Cuvier, Lacépède, Bloch, Bleeker, Gunther, and others, are well represented. These, supplemented by the proceedings of various societies and institutions, make a collection of books of great value to advanced students and investigators in ichthyology. The library is conveniently arranged, and is situated in the Zoology building near the laboratories and collections.

The Barbara Jordan Library of Birds.—A memorial collection presented by Chancellor Jordan, and to which frequent additions are made. While some of the older texts are not represented, it is a good working library of ornithology and contains the principal modern works on the subject.

The Hopkins Railway Library.—A collection of approximately 10,000 volumes and pamphlets dealing with the subject of transportation. In 1892 Mr. Timothy Hopkins, of San Francisco, presented to the University his private library on railroads, consisting of about 2,000 books, personally providing for its maintenance and growth for many years. The collection is shelved by itself in one of the seminary rooms. It is general in scope, intended to embrace all subjects touching on the building, maintenance, and operation of railways. It is especially rich in state and government reports, as well as in reports of individual railroads both in the United States and Europe, with much material pertaining to their history.

THE HILDEBRAND LIBRARY.—In 1895 the University acquired the library of Professor Hildebrand, of Leipzig, containing more than 5,000 volumes and pamphlets relating largely to Germanic languages and literature, the seventeenth and eighteenth centuries being especially well represented, and including also a notable collection of three hundred old dictionaries. The value of the books is greatly enhanced by the manuscript notes of Professor Hildebrand.

THE FLÜGEL COLLECTION, which formed the more important part of Dr. Ewald Flügel's library, was purchased in 1915 and numbers about 4,000 volumes. It contains copies of the 15th century editions of Vincent of Beauvais, a number of important and rare 16th century writers (e. g., Bale's Catalogus, 1557-9; Luther, 1539-59; More, 1557; Holinshed, 1586), and a good many 17th century 4tos and folios (Islip's Chaucer, Selden, Browne, Stow, etc.). The history of philology is well illustrated (Spelman, Junius, Hicks, et al.). The library has now a solid foundation in these fields and can supply a large amount of material for the study of certain aspects of the 16th and 17th centuries.

THE THOMAS WELTON STANFORD AUSTRALASIAN LIBRARY.—A good working collection of books relating to Australia and New Zealand. It is especially rich in early voyages, travels, and descriptions. Several hundred volumes of parliamentary reports of the Australian states, the Commonwealth, and New Zealand, are included. The publications of learned societies, such as the Royal Societies of New South Wales and Victoria, the Australian Museum, and the New Zealand Institute, are well represented, while considerable pamphlet material also is available.

BRITISH PARLIAMENTARY PAPERS.—An unusually complete set of British government documents from 1801 to date, some 6,500 volumes, of which the first 3,500 volumes constituted a special gift to the Library, made by Mrs. Stanford in 1900. The set contains not only the full papers laid before Parliament from the customary departments of government, such as diplomatic, colonial, and financial papers, but also the most valuable reports of the special committees and royal commissions, offering material for research in almost every field of knowledge. Taken in connection with the Library's excellent file of United States Documents, and of the governmental publications of Canada, and of Australasia, the collection offers unusual facilities for study in the public undertakings of English-speaking peoples.

THE JARBOE COLLECTION ON THE FRENCH REVOLUTION.—Acquired in 1910. It contains original materials, principally in French, relating to the Revolutionary and Napoleonic era. Two features of the collection are of particular interest to advanced students of history—the original and contemporaneously printed pamphlets, of which many are unusual; and the memoirs, of which there is a comprehensive selection.

THE LAW LIBRARY.—A library of about 21,000 volumes, selected with care and adequate for the study of English and American law. It contains practically complete sets of the reports of the courts of England, Scotland, Ireland, Canada, the United States and the several states, together with a valuable collection of statutes, treatises and periodicals.

THE LANE MEDICAL LIBRARY.—Founded by the directors of Cooper Medical College in accordance with the bequest of Mrs. L. C. Lane. The Library contains about 43,000 volumes, and is particularly rich in its collection of medical and allied periodicals. The leading domestic and foreign journals are currently received. The new library building, erected in 1912, is a fireproof structure of Colusa sandstone, and is located opposite the other medical buildings, on the corner of Sacramento and Webster streets, San Francisco.

THE BRANNER GEOLOGICAL LIBRARY.—The Geological Library (room 333) is the result of twenty-five years of painstaking acquisition by Dr. JOHN CASPER BRANNER. It includes a vast wealth of material relating to geology, paleontology, mineralogy, geography, mining and metallurgy. It is especially well equipped with files of journals and the transactions of scientific societies, together with a large collection of state and government reports.

MARINE BIOLOGICAL LABORATORY

Professors CHARLES HENRY GILBERT and OLIVER PEEBLES JENKINS, Directors.

The Laboratory buildings are located at Pacific Grove, two miles west of Monterey, and stand on a low bluff immediately facing the sea. They consist of two two-story structures capable of accommodating about sixty students, and contain four general laboratories, one lecture-room, seventeen private rooms for special investigators, and a dark-room for photography. They are provided with running water, both salt and fresh. The library and apparatus of the University are available for use in the Laboratory.

SESSION OF 1916

Associate Professor JOHN OTTERBEIN SNYDER, Instructor in Charge.

The Twenty-fifth Session extended over a period of six weeks, beginning May 22d and closing July 1st.

COURSES OF INSTRUCTION

General Zoology.—A course of laboratory work, lectures, and field excursions, designed to illustrate the structure, life history, habits, and relationships of the principal groups of animals.

Embryology.—A study of the early development of the embryos of invertebrate and vertebrate animals, including practice in the preparation of material. For students who have had either elementary Zoology or Physiology.

Provision was made for a limited number of students prepared to undertake advanced work in Zoology.

The sessions of the Marine Laboratory form a part of the biological work of Stanford University. Students who register at Pacific Grove, and satisfactorily complete the prescribed work, receive six units of University credit.

EXPENSES—A laboratory fee of twenty-five dollars is payable in advance. To investigators engaged in research, the use of the laboratory is offered free of charge.

Pacific Grove is a quiet seaside resort, well supplied with hotels and cottages, where no difficulty is experienced in obtaining boarding accommodations with a considerable range in price.

MATHEMATICS

ROBERT EDGAR ALLARDICE, RUFUS LOT GREEN, HANS FREDERICK BLICHFELDT, Professors.

LAURA CORNELIA CLARK, Assistant in Instruction.

The courses in this department have been arranged to meet the wants of two classes of students—students whose major subject is Mathematics, and students who, while taking their major in some other department, desire to include some mathematics in their course. Students in Engineering are provided for in the Department of Applied Mathematics.

For students whose major subject is Mathematics the following programme of work is recommended: In the first year, courses 3 and 4; in the second year, courses 9, and 10 or 21; in the third year, courses 11, 12, and 15; while the work during the fourth year and for graduate students may be selected from the remaining courses, and from the Department of Applied Mathematics. The advanced courses will, for the most part, be given once in two or once in three years, and it is hoped that the advanced students will thus have the opportunity of studying the more important branches of modern mathematics.

Students whose major subject is Mathematics are recommended to begin the study either of French or of German in their freshman year.

Students who desire to take one or more years of Mathematics as a part of a liberal training are recommended to begin their work in this Department with one or more of the courses 1, 2, 3, 6, and 7.

The TEACHER'S RECOMMENDATION.—For the High School Recommendation in Mathematics the following courses are required: 1, 2, 3, 4, 9, and 10 or 6.

1. **Trigonometry.**—Elementary course, with applications involving logarithmic calculation.
3 units, either semester (GREEN, CLARK) MWF 8, 9

2. **Solid Geometry.**—Elementary course.
3 units, 1st semester (BLICHFELDT) TThS 10

3. **Algebra.**—Fundamental laws, degree, symmetry, indeterminate coefficients, remainder theorem, factors, introduction to theory of equations. Presupposes entrance credit in elementary algebra.
5 units, 1st semester (GREEN) MTWThF 8

3a. **Algebra.**—Binomial theorem, equations, progressions, logarithms, interest, annuities, insurance, problems in investment. Presupposes entrance credit in algebra.
5 units, 1st semester (GREEN) MTWThF 8

4. **Co-ordinate Geometry.**—An elementary course in the analytic geometry of the conic sections. Presupposes course 3.
5 units, 2d semester (GREEN) MTWThF 8

[Students making Mathematics their major subject should take courses 3 and 4 as the first year's work, and those who have not had Trigonometry should also take course 1.]

5. **Advanced Algebra.**
3 units, both semesters (BLICHFELDT) MWF 9

6. **Plane Geometry.**—This course includes a rapid revision of elementary geometry, together with additional theorems and references to modern theories. It is recommended to those who expect to teach

mathematics, and presupposes entrance credit in plane geometry.
2 units, both semesters (Allardice) TTh 10

7. General Course.—A brief and elementary survey of the principles of Algebra, Trigonometry, Co-ordinate Geometry, and Calculus. Presupposes elementary algebra and plane geometry.
3 units, both semesters (Blichfeldt) MWF 10

8. Algebra for Teachers.
3 units, 2d semester (Green) [Not given in 1916-17.]

9. Differential and Integral Calculus.—Lectures on the Differential and Integral Calculus, with applications to the theory of plane curves, on the lines of Williamson's treatises.
3 units, both semesters (Allardice) MWF 9

10. Advanced Co-ordinate Geometry.—A continuation of course 4.
2 units, both semesters (Green) TTh 9

11. Advanced Calculus.—A continuation of course 9.
3 units, 1st semester (Allardice) MWF 11

12. Theory of Functions.—Elementary course.
3 units, 2d semester (Allardice) MWF 11

13. Non-Euclidean Geometry.—Presupposes a course in Calculus.
3 units, 1st semester (Blichfeldt) MWF 11

14. Modern Co-ordinate Geometry.—Introductory course.
3 units, 1st semester (Green) [Not given in 1916-17.]

15. Differential Equations.
3 units, 1st semester (Blichfeldt) MWF 9

16. Definite Integrals.
2 units, 1st semester (Allardice) [Not given in 1916-17.]

17. Advanced Theory of Functions.
4 units, both semesters (Allardice) By arrangement

18. Theory of Equations.
3 units, both semesters (Green) [Not given in 1916-17.]

19. Solid Co-ordinate Geometry.
3 units, both semesters (Allardice) MWF 11

20. Vector Analysis.
2 units, 2d semester (Blichfeldt) MF 11

21. Projective Geometry.
2 units, both semesters (Allardice) TTh 9

22. Selected Readings.
2 units, 2d semester (Allardice, Blichfeldt)

26. Higher Plane Curves.
3 units, both semesters (Allardice) [Not given in 1916-17.]

MEDICINE

WILLIAM OPHÜLS, Acting Dean.
GEORGE BURBANK SOMERS, Secretary of the Medical Faculty.

BUILDINGS AND EQUIPMENT

The main buildings in San Francisco occupy four fifty vara lots bounded by Clay, Sacramento, and Webster streets, and consist of the Clinical and Laboratory Building, including Lane Hall and Lane Hospital, a modern building in brick and stone, with a capacity of one hundred and eighty beds. The Lane Medical Library is situated on the corner of Sacramento and Webster streets, opposite the Clinical and Laboratory Building, and the nurses are housed in several buildings on Clay street opposite the Lane Hospital. The Clinical and Laboratory Building has recently been remodeled and is devoted entirely to out-patient clinics and laboratories.

The laboratories of Anatomy, Bacteriology and Immunology, Chemistry, and Physiology are located on the Campus at Stanford University.

CLINICAL OPPORTUNITIES

The Stanford Hospitals

LANE HOSPITAL

Lane Hospital was designed as a Teaching Hospital and built by Dr. Levi Cooper Lane. It is under the immediate control of the Clinical Committee appointed from the Medical Faculty by the President of the University with the approval of the Board of Trustees. It is a general hospital receiving both private and clinic patients, situated at Clay and Webster streets and directly connected with the Clinical and Laboratory Building. In its clinical department there are over one hundred beds used for purposes of teaching. These are arranged into five wards, one each for Surgery, Medicine, Gynecology, Obstetrics, and Pediatrics. As the patients in these clinical beds are sent in largely from the Out-patient clinic and as they remain in the Hospital for short periods of time only, unusual opportunity is offered for the study of selected cases.

STANFORD HOSPITAL

Work has begun on the construction of a new surgical pavilion, to be known as the Stanford Hospital, to accommodate one hundred and eighty patients. The engine-room and power-house for this new hospital are now completed and a large central laundry has been constructed. It is expected that the new building will be ready for occupancy about the beginning of the next academic year (i. e., October, 1917).

The tuberculosis clinic is held in close co-operation with the San Francisco Society for the Study and Prevention of Tuberculosis.

The Associated Charities send to the clinic a portion of their maternity cases, and provision is also made for the care of a portion of their sick poor. The San Francisco Maternity contributes a considerable sum towards the support of the Women's Clinic. This is particularly devoted to out- and in-patient obstetrics. The Fruit and Flower Mission assists greatly in the care of maternity cases.

During the year 1912-13 Mrs. Emily B. Hopkins presented the Hospital with $10,000 for the endowment of a bed. Mrs. Kate Felton Neilson provides maintenance for a bed, and she and her brother, Charles N. Felton, Jr., provide a fund for the care of clinical patients. Other friends of the Hospital have contributed freely for the care of clinical patients.

Charles G. Lathrop, former Treasurer and Business Manager of the University, left $10,000 by his will for the Medical School of the University.

David Hewes left $6,000 to the Lane Hospital for the endowment and maintenance of a bed to be known as the "David Hewes Free Bed."

PATIENTS' FUND

The Trustees of the University have established a fund known as the "Patients' Fund," the income of which is used for the support of free beds. This fund, to which contributions of any size can be made at any time, originated from money received from former patients of Lane Hospital. Much of it has been given by grateful clinical patients.

SAN FRANCISCO HOSPITAL

At the present time the Medical School controls over one hundred beds in the new San Francisco Hospital, averaging about a thousand patients per year. This hospital, erected at an expense of two million dollars, is one of the finest and most complete structures of its kind in America. Possessing separate buildings for the care of contagious diseases and of tuberculosis, in addition to the main group for general surgical and medical cases, there is centered within the hospital grounds, convenient for teaching purposes, an abundance as well as a great variety of clinical material.

OUT-PATIENT DEPARTMENT

The lower floor of the Clinical and Laboratory Building is devoted entirely to the Surgical Out-patient Clinic and its various subdivisions; the second floor to the Medical Out-patient Clinic with its subdivisions; the three upper floors contain the Pathological Museum and the laboratories of Experimental Medicine, Pathology, Pediatrics, Pharmacology, Obstetrics and Gynecology, and Experimental Surgery. The laboratory of Clinical Pathology and the Outpatient Department are separated only by a short corridor from the clinical wards of the Hospital, so that both in- and out-patients are equally available for teaching purposes. About seventeen thousand new patients were received during the past year, with a total number of visits of about ninety-four thousand.

DENTAL CLINIC

An Emergency Dental Clinic has been established in connection with the Out-patient Department. Complete equipment has been provided and the work taken up by Dr. Fred Wolfsohn, under the supervision of Dr. James G. Sharp.

HOSPITAL INTERNESHIPS

Twelve internes, a house officer, and an assistant house officer are appointed annually at the Lane Hospital. Six of these are Senior Internes and have a continuous service for one year with the option of renewal in any of the following divisions: Medicine, Pediatrics, Surgery, Obstetrics and Gynecology; Actinography. Six Junior Internes, with a rotating service, are likewise appointed. In addition to their other services they are assigned in rotation to a two months' service in Psychiatry at the Napa State Hospital. Five of these are eligible for Senior Interneships later. An Externe is also appointed for the Eye, Ear, Nose, and Throat Department. Six interneships, including a rotating service and also two months at the Napa Hospital, and an appointment as house officer are also available in the Stanford service at the San Francisco Hospital, as are also several other interneships at other hospitals in the City and the State.

COURSE IN EMERGENCY MEDICINE AND SURGERY

Students in the senior year in medicine are offered an opportunity to do emergency work in Medicine and Surgery at the various Emergency Hospitals in the City, under the direction of the Chief Surgeon of the Emergency Service. The course is optional, but students signing up for the work are expected to spend at least 120 hours of time on it; hours to be arranged so that they do not conflict with the regular class work. Upon completion of the course students will be expected to pass an examination to the satisfaction of the Chief Surgeon. Failure to do so will count against them in their credits for hospital appointment; otherwise credit will be given by the University for work performed.

LIBRARY FACILITIES

The LANE MEDICAL LIBRARY, founded by the Directors of Cooper Medical College, as provided by the will of Mrs. Levi Cooper Lane, comprises 43,000 volumes. The larger part of the library was obtained from the New York Academy of Medicine and represents their duplicate collection made up largely of books originally belonging to the once well known Medical Library of the New York Hospital. About 500 periodicals are currently received, and the numerous files of bound volumes are practically complete.

Cards of current medical accessions are received from the Library of Congress and from the John Crerar Library in Chicago. These, with the catalogues of the Surgeon General's Library, facilitate borrowing books from three great libraries. Loans are also made to and from the University Library at Stanford, which contains about 200,000 volumes.

ADMISSION TO THE SCHOOL OF MEDICINE

(Applicants for admission to the first five quarters in medicine should communicate with The Registrar, Stanford University, California; those desiring to enter the upper classes of the Medical School (*i. e.,* from the sixth to the twelfth quarters), should communicate with The Dean, Stanford University Medical School, corner Sacramento and Webster streets, San Francisco, Cal.)

Three years of collegiate work in Stanford University (approximately one hundred and thirty-five quarter unit hours), or its equivalent as accepted by the Committee on Advanced Standing, is required for admission to the School of Medicine. This preparatory training must include Chemistry, including Qualitative Analysis (and, after 1917, Quantitative Analysis),* one year of Physics, and one year of Physiology or Biology, with laboratory work in each, and such a reading knowledge of French or German as shall be acceptable to the School of Medicine. It is recommended that both German and French be studied and that a lecture and laboratory course be taken in Psychology.

Beginning with 1919 five quarter units of Organic Chemistry will be required for entrance to the Medical School. In the meantime, owing to the crowded condition of the Medical curriculum in the first year, prospective students are urgently advised to take the required five units of Organic Chemistry before entering the Medical School.

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*Course K (combined course) in the Department of Chemistry is intended to cover this work. Beginning with 1917 this course will be required for admission to the Medical School.

Candidates for admission to the School of Medicine, or for advanced standing in the School, are permitted to register with one condition, but the condition must be removed within one year to the satisfaction of the head of the School or Division in which the condition was incurred.

The State Law governing the practice of Medicine in California prescribes that every person before practicing Medicine or Surgery must produce satisfactory testimonials of good moral character and a diploma issued by some legally chartered medical school approved by the Board of Medical Examiners, the requirements of which school shall have been at the time of granting such diploma in no degree less than those prescribed by the law. The main provisions of this law are that the applicants must show records of four medical courses of thirty-two weeks' duration, following a preliminary preparation, at present of a high school course or specified equivalent and after January 1, 1919, in addition, a course which includes at least one year of work of college grade in each of the subjects of Physics, Chemistry, and Biology. The specified four years' medical course includes 4000 schedule hours, embracing the usual medical curriculum. In the course of study outlined the hours required are hours of actual work in the class room, laboratory, or hospital, and at least eighty per cent of actual attendance is required.

Students in any Department of the University who desire to enter upon the study of Medicine and who have included in their course of study the subjects required for admission to the Medical School, may, at the beginning of their fourth or senior year in the University, enroll as students in medicine and continue as candidates for the degree of Bachelor of Arts.

A student who, through delay in making a choice of Medicine, is unable to complete the requirements of his Major department and the first year in Medicine by the end of his senior year, may nevertheless register in Medicine and be eligible for the degree of A. B. in the Department of Physiology and Histology at the end of the twelfth quarter—the third quarter in Medicine.

Students who have included in their course of study the subjects required for admission to the Medical School while retaining their registration in their Major Department as candidates for the degree of A. B., must also enroll in the School of Medicine during the fourth year and pay the fees of the School in order that this year may count as part of the four years' registration in Medicine as required by the law of the State and the five years required by the regulations of the University. Tuition fees are required for but four years of the medical course.

Limitation of the Number of Students

The accommodations of the Medical School at San Francisco render it inadvisable to admit more than 25 students to each class. It is therefore necessary to restrict the number of students to 25 in each class, commencing with the sixth quarter.

Students planning to continue their work at Stanford University after the first year should notify the Dean in writing to that effect at as early a date as possible, and file a complete record of their preparatory, collegiate, and medical work with the Registrar before the end of the fourth quarter in Medicine. No one will be permitted to enroll in the sixth quarter in Medicine with less than 210 units of credit or with a condition in more than 7 units in any required subject, except by consent of the Dean, which must be confirmed by a special vote of the Faculty.

The Eight Years' Curriculum

The combined eight years' curriculum—three years of college work and five years in medicine—leads to the degrees of Bachelor of Arts and Doctor of Medicine.

Special Workers

Physicians and others who are properly qualified, but not candidates for a degree, may be admitted to work in the School of Medicine with the permission of the Dean of the School and of the professor or professors concerned. Such persons shall be listed as Special Workers and pay such fees as are required by the Dean and the Executive Head of the Division concerned.

The Curriculum in Medicine

The required period of study for the degree of Doctor of Medicine is five years (fifteen quarters). The work of the first five quarters is given at Stanford University and is devoted to anatomy, bacteriology, chemistry, embryology, histology, neurology, and physiology. The next seven quarters are devoted to work in the pharmacological, pathological, and clinical laboratories and in the hospital wards and the Out-patient Department in San Francisco. The last year is spent in hospital work.

In order to correlate the work of some of the Divisions and to facilitate research in others, all courses in Medicine, except those in anatomy, bacteriology, chemistry, and physiology, are given in San

Francisco. By reducing the number of required hours to approximately the number decided upon by the Association of American Medical Colleges, the student's opportunity for taking optional and elective courses has been increased and time obtained for thesis work.

REQUIRED INTERNE YEAR

All students are required to take a fifth practical year in Medicine before receiving the degree of Doctor of Medicine. Arrangements may be made so that the fifth year may be spent as worker in a laboratory. No tuition fee is required of internes and most interneships include a small salary.

FEES

The tuition fees of the Medical Department are $150 per annum for four years, payable in installments of $50 each quarter; $4 per quarter for the first five quarters, covering charges for material; and such other deposits to cover breakage or loss of apparatus and materials, as may be required in any department or division, these deposits being returnable, less charges for breakage, loss, or wear and tear of apparatus, or for materials used. The total deposits for this purpose may vary from $12 to $20 per annum.

MICROSCOPES AND INSTRUMENTS

By action of the Medical Faculty taken May 12, 1912, students will be expected to supply themselves with microscopes. The Medical School offers the use of a microscope for the college term, not including the summer vacation, to students who do not possess instruments of their own, on deposit of $10 and a rental of three dollars per semester. This deposit, less the cost of necessary repairs, is refunded on return of the microscope. In the laboratories of physiology and histology and in embryology microscopes are furnished free.

All students are expected to provide themselves with a satisfactory blood counter for their own use, and such other pieces of individual apparatus as are essential to the required work.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF MEDICINE

The candidate for the degree of Doctor of Medicine must, according to the laws of the State, have attained the age of twenty-one years and have attended a medical college of recognized standing for four years. He must further have fulfilled the entrance requirements of the Medical School of Stanford University before enrolling as a medical student, have satisfactorily completed the required curriculum, passed all examinations, paid in full the required fees, and have spent the last two of the five years in Medicine at the University. Physicians who have already received the degree of Doctor of Medicine are not received as candidates for this degree by the Stanford Medical School.

Regulations Concerning Theses

A thesis based as much as feasible upon research work will be required of each student. If the thesis is not completed previously, four curriculum hours of the seventh and eighth semesters are to be devoted to its preparation under the supervision of one of the executive heads of Divisions.

Students of Medicine may select the Division in which they desire to write their Thesis, and if properly qualified may begin work on the same at any time before the beginning of the second quarter of their fourth year in Medicine. The topic for investigation or the subject matter for study shall be chosen with the advice and consent of the Executive Head of the Division concerned, and no change of subject shall be made without the consent of the Executive under whose direction the work was begun. Except by special permission theses must be completed by the end of the fourth year in medicine.

Advanced Degrees in the Medical School

The Divisions of the Medical School are considered as equivalent to other departments of the University in respect to candidacy and requirements for the degrees of Master of Arts and Doctor of Philosophy, and all the foregoing regulations apply to these divisions and division faculties as to departments and department faculties, with the following modifications and limitations:

1. Candidates for these degrees must have received the degree of A. B. at Stanford, or an equivalent degree elsewhere, and must have completed all requirements for admission to the School of Medicine, and such other requirements as each division faculty may prescribe.

2. Time spent in candidacy for the degree of Master of Arts or Doctor of Philosophy will not be counted toward the degree of Doctor of Medicine.

3. Candidates for these degrees in the divisions of Medicine, Surgery, and Obstetrics and Gynecology, must have received the degree of Doctor of Medicine.

Medical Adviser

A Medical Adviser is appointed for the Medical students in San Francisco. All students are expected to undergo an annual medical examination and to call in the Medical Adviser in case of illness. The Medical Adviser for 1916-17 is Dr. Ernest Charles Dickson.

STUDENTS' GUILD

The Guild is a student organization which seeks to make provision for the care of all cases of serious illness among its members. An arrangement has been made by the Guild with the Lane Hospital for the care of Medical students with non-contagious diseases. The Medical students are required to become members of the Guild by paying the fee, which is two dollars each quarter. A uniform hospital rate of one dollar per day is charged all members of the Guild, in addition to such special charges as may be incurred for extra service.

SUMMER GRADUATE MEDICAL COURSE

(JULY 6 TO AUGUST 15, 1916)

MEDICAL GROUP

1. Clinical Medicine. (ADDIS, DICKSON, BOARDMAN, BARNETT, CLARK, O'NEILL, TUPPER, REED, BEHLOW) Daily, 11-12

The class is limited to ten. The work consists of clinical studies and demonstrations covering the various methods of diagnosis and treatment. Special attention is devoted to the following: Diabetes and Gout (ADDIS); Gastro-Intestinal Diseases (BOARDMAN, BEHLOW); Tuberculosis (CLARK); Cardio-Renal Diseases (DICKSON, TUPPER); Infectious Diseases (O'NEILL); Tropical Diseases (REED). For this work the material of the Out-patient Department of the University, the wards at Lane Hospital, the Stanford wards at the San Francisco Hospital, the Tuberculosis Clinic and Tuberculosis Hospital, and the Isolation Hospital are available, and the members of the class have the opportunity of personally following cases in the medical wards of Lane Hospital under the direction of the members of the staff, and of attending daily rounds from 9 to 10:30. Fee, $35.

2. Clinical Pathology. (BARNETT) TTh 2-4

The class is limited to six. The work consists of talks on the various methods and their application and interpretation in Clinical Medicine, with practical laboratory work in the examination of blood, urine, stool, sputum, stomach contents, cerebro-spinal fluid, etc. The laboratory is open daily for work. Fee, $35.

3. Actinography. (BOARDMAN) Daily 1:30-2:30

The class is limited to six. The work covers the field of X-Ray diagnosis and treatment, especial attention being given to the study of gastro-intestinal diseases, with practical work in fluoroscopy, radiography, and radiotherapy. Fee, $35.

4. Clinical Neurology. (SCHALLER, INMAN, MEHRTENS, COSGRAVE, at Medical School) TTh 10-11
(WOLFSOHN, at San Francisco Hospital) S 10-11
The class is limited to ten. The work consists of clinical studies and demonstrations of neurological material. On Tuesdays and Thursdays DR. SCHALLER and assistants meet the class in the Neurological Clinic in the Medical School building. On Saturdays Dr. WOLFSOHN holds rounds on the neurological material in the Stanford service at the San Francisco Hospital. The members of the class also have the opportunity of studying the neurological material in the Out-patient Department and in the wards. Fee, $25.

5. Dermatology and Syphilis. (ALDERSON) TWF 9-10
The class is limited to six. The work consists of clinical studies and demonstrations of dermatological cases, especial attention being given to syphilis and the various methods of treatment, to the histopathology of skin diseases and vaccine therapy. Fee, $35.

6. Pediatrics. (PORTER, FABER, YERINGTON, LYMAN) Daily 9-10:30
Class limited to six. The work consists of clinical studies and demonstrations in the Out-patient Department and ward rounds in the Children's Ward of Lane Hospital. Special attention is given to infant feeding, with opportunity for laboratory work in milk analysis, stool examination, etc. Fee, $25.

7. Serology. (OLIVER) TF 9-11
The class is limited to six. The work consists of talks, demonstrations, and practical work in serological diagnosis, Wassermann tests, etc. Laboratory is open for work in odd hours. Fee, $25.

SURGICAL GROUP

8. Clinical Surgery. (COWAN, BLAISDELL, ROTHGANGER, HAAS, HYDE, HARBAUGH) Daily 8:30
The class is limited to six. The work consists of daily ward rounds in the Surgical ward of Lane Hospital or the Stanford ward at the San Francisco Hospital.

Routine work in Out-patient Department, MWF 9:30-11; Diagnostic clinic, TTh 11-12; Operative clinics at Lane Hospital, T 10-12, Th 8:30-11, 1-3, S 8:30; Operative clinics at the San Francisco Hospital, F 8:30-12.

9. Operative Surgery. (EAVES) Hours to be arranged
The class is limited to six. The work covers surgical anatomy, important amputations, ligations, general bone surgery, abdominal and pelvic operations—this work to be performed on cadavers and on laboratory animals. Fee, $30.

10. Anatomy. (BLAISDELL)
The laboratory is open and material is available for those desiring work in dissection under the supervision of DR. BLAISDELL.

11. Orthopedic Surgery.

(*a*) Clinical instruction in the Out-patient clinic. (FISHER, LANGNECKER.) MTTh 9:30-11. Class limited to six. Fee, $25.

(*b*) Postural Deformities and Deficiencies. (LANGNECKER) MWF 1-3.

The relation of correct posture to human efficiency is studied, including an anatomic explanation of the so-called carnivora and herbivora types of humans with their various deviations from the normal. Also methods and treatments for the improvement of deformities resulting (1) from congenital or acquired abnormalities, or (2) from infantile, obstetrical, and spastic paralyses, etc. Open to medical students and teachers interested in postural correction. Fee, $25.

(*c*) Lateral Curvature and the Technic of Orthopedic Apparatus. (LANGNECKER) Two hours a week; hours to be arranged. Class limited to eight. Fee, $20.

(*d*) Growth and development of Bone. (FISHER) Two hours weekly. Class limited to five. Laboratory course. Fee, $20.

(*e*) Operative and Ward clinics in the Lane Hospital. (LANGNECKER, FISHER) F 10:00. Open to students in courses *a, c,* or *d.*

(*f*) Instruction in the Pathology of Bone and Joint Diseases. (ELY) Fee and duration of course by arrangement.

12. Clinical Ophthalmology. (BARKAN) MWF 1:30-3:30
The class is limited to ten. The work consists of clinical lectures, the study of clinical material in the Out-patient Department from a diagnostic and therapeutic standpoint, and instruction in the common methods of examination and treatment. Minor operations are demonstrated and as far as possible performed by the class. Each student has ample opportunity to treat external diseases, and to ophthalmoscope. Tuesday afternoons the operating room at Lane Hospital is available for attendance at eye operations. Fee, $35.

13. The Eye and General Medicine. (BARKAN) MTWThF 5-6
(last week of session)
Class unlimited. The work consists of five illustrated lectures covering the eye conditions found in diabetes and nephritis, syphilis, arteriosclerosis, amaurotic family idiocy, hysteria, brain tumor, abscess, meningitis, and other intra-cranial conditions. Fee, $10.

14. Principles and Practice of Refraction. (BARKAN) MWF 3:30-4:30
Class limited to five. This course consists of short talks on the prin-

ciples of refraction, with practical work in refraction, under the supervision of the instructor. Fee, $25.

15. Otology and Laryngology. (McNaught) MTWThF 3-4
For a class of six. The work includes general clinical studies and demonstrations of routine cases, with especial consideration of the physiology and pathology of the middle ear and labyrinth, and the surgical anatomy of the nose and throat, with specimens and operative demonstrations. Members of the class have the privilege of following the routine handling of cases in the Out-patient Department and in the Clinic Wards of the Lane Hospital. Fee, $35.

16. Genito-Urinary Surgery. (Rigdon, Williams, Haas, Woolsey) MWF 9-10
The class is limited to ten. The work consists of routine clinical studies and demonstrations of cases and of operative clinics. The members of the class are privileged to follow the handling of the routine work in the Out-patient Department and in the Clinic Wards of Lane Hospital. Fee, $35.

Obstetrics and Gynecology

17. Gynecology. (Stephenson, Gibbons, Girard)
The work consists of:

(*a*) Daily morning instruction in the Out-patient Department, in methods of examination, diagnosis and treatment.

(*b*) Operative Clinics—T, 8 a.m., San Francisco Hospital; T, 2 p.m., W, 10 a.m., F, 2 p.m., Lane Hospital.

(*c*) Study of pathological material of the Department in the Pathological Laboratory. T, 2 p.m. Fee, $35.

18. Practical Obstetrics. (Moore)
Students are to live in the Clinic and devote their entire time to Obstetrics. The work consists of routine obstetrical work with talks and demonstrations on pelvic measurements, antepartum examinations, confinement in patients' homes and in hospitals, postpartem care and examination of patients six weeks after delivery. Fee, $25.

19. Cystoscopy. (Beasley, Williams) MTWThF 8-9 a.m.
Each class must consist of not less than three. The work includes demonstrations and practical instruction in cystoscopy, urethral catheterization and methods of estimating renal function. Fee, $35.

20. Anaesthesia. (Palmer) W 4-5
Class limited to six. The work consists of talks on the various anaesthetics. The members of the class will have the privilege of administering the routine clinic anaesthesias under the direction of Dr. Palmer.

21. Pathology. (BAILEY, OLIVER) WF 4-5
The work consists of discussions and demonstrations of specimens in selected subjects and clinical autopsies. The material of the Department is at the disposal of the members of the class for study. Fee, $25.

THE CURRICULUM

[The Roman numerals in parentheses indicate the number of the course; the Arabic numerals, the number of hours in each course.]

FIRST SEMESTER	Lec. hours	Lab. hours	Units of credit
Neurology—Gross and Minute Anatomy of the Brain and Spinal Cord, (Phyl. V)	1	5	3
Histology (Phyl. IX)	1	5	3
Gross Anatomy (Anat. I, II, III, IV)	1	9	4-5
Physiology — Muscle and digestion (Phyl. II)	2	5	4
Embryology (Zool. XI)		6	2
	5	30	16-17
SECOND SEMESTER			
Histology (Phyl. IX)	1	5	3
Gross Anatomy (Anat. I, II, III, IV)	2	10	4-5
Physiology—Blood and circulation, respiration, nutrition, metabolism, nervous system, sense organs (Phyl. III and VI)	2	10	7
Organic Chemistry (Chem. IIIa)	3		3
	8	25	17-18
THIRD SEMESTER (First Semester of Second Year)			
Bacteriology (Bact. II)	4	7	7
Gross Anatomy (Anat. I, II, III, IV)	2	11	5
Physiological Chemistry (Chem. *g*, XI)	3	9	6
	9	27	18

FOURTH SEMESTER (Second Semester of Second Year)

	Hours per week
Medicine (I)	7
Clinical Pathology (II)	3
Physical Therapeutics (III)	2
Pharmacology and Materia Medica (I*a*)	6
Surgery (I, 1½) (II, 3) (III, 2)	6½
Pathology (I)	9½
	34

FIFTH SEMESTER (First Semester of Third Year)

Medicine (V, 8) (VII, 1)	9
Clinical Pathology and Experimental Medicine (IV)	2
Neurology (XII)	1
Pediatrics (XVIII)	2
Pharmacology and Materia Medica (1*b*)	3
Surgery (IV, 3) (VII, 5)	8
Surgical Pathology (VI)	2
Obstetrics (I, 2) (III, 1)	3
Pathology (III)	4
	34

SIXTH SEMESTER (Second Semester of Third Year)

Medicine (VI, 4) (VII, 1)	5
Clinical Pathology and Experimental Medicine (IV)	2
Neurology (XIII)	2
Pediatrics (XIX)	5
Surgery (V, 2) (VII, 4)	6
Surgical Pathology (VI)	2
Obstetrics and Gynecology (I, 2) (III, 1)	3
Pathology (III)	4
Hygiene (I)	1
Dietetics (XXVI)	1
	31

SEVENTH SEMESTER (First Semester of Fourth Year)

Medicine (VII, 1) (VIII, 4)	5
Pediatrics (XX)	2
Dermatology (XXII)	3
Legal Medicine (XXVII)	1
X-Ray (X)	1
Psychiatry (XVI)	1½
Surgery (VIII)	3
Orthopedic Surgery (XIII)	2
Genito-Urinary Surgery (XII)	3
Eye, Ear, Nose, and Throat (X, 2) (XI, 2)	4
Obstetrics (IV)	2
Gynecology (V, 2) (VI, 1)	3
Hygiene (I)	1
Thesis	4
	35½

EIGHTH SEMESTER (Second Semester of Fourth Year)

Medicine (IX)	6
Neurology (XIV)	2
History of Medicine (XXV)	1
Dietetics (XXVI)	1
Psychiatry (XVII)	1½
Surgery (IX)	4
Eye, Ear, Nose, and Throat (X, 2) (XI, 2)	4
Obstetrics (IV)	2
Gynecology (V, 2) (VI, 1)	3
Hygiene (I)	1
Thesis	4
	29½

NINTH AND TENTH SEMESTERS—HOSPITAL YEAR

Clinical Examinations in Medicine, Surgery and Obstetrics.

I. DIVISION OF ANATOMY

ARTHUR WILLIAM MEYER, Professor.
EDGAR DAVIDSON CONGDON, Assistant Professor.

[The courses of study are as outlined under Anatomy, pp. 92-93.]

II. DIVISION OF BACTERIOLOGY AND IMMUNOLOGY

Wilfred Hamilton Manwaring, Professor.
Harry Johnson Sears, Instructor.
Marcus Claude Terry, Clinical Instructor.

[The courses are as outlined under Bacteriology and Immunology, pp. 96-97.]

III. DIVISION OF CHEMISTRY

John Maxson Stillman, Robert Eckles Swain, Professors.

[The numbers of the courses correspond to those under the individual Department, pp. 101-106.]

***3a. Organic Chemistry.**—A lecture course embracing a study of the classification, structural formulae, and properties of the more important compounds of carbon. The chemical relationships of the larger groups of organic compounds, alcohols, aldehydes, and ketones, acids, amines, and the halogen, sulphur, and nitrogen compounds will be emphasized, special attention being given throughout the course to those compounds which are of physiological and pathological interest.

3 units, 2d semester (Swain) MWF 11

g. Physiological Chemistry.—A laboratory course including a preliminary study of the proteins, carbohydrates, and fats, and the action of the various digestive fluids upon them, followed by a chemical examination of the bile, blood, milk, the chief tissues of the animal body, and the excretions. This course should be preceded by the equivalent of Courses 1, *a,* and *k,* in the Department of Chemistry, and course 3*a* above.

3 afternoons, 3d semester (Swain) MTW 1:05-4:05

11. Physiological Chemistry.—To accompany Course *g*. Lectures on the chemical composition and action of the tissues and secretions of the animal body, the digestion of foods, and the elimination of waste products.

3 units, 3d semester (Swain) MWF 11

i. Toxicology.—A laboratory course, accompanied by informal lectures, dealing with the more important poisons, their physiological action and the prominent reactions employed in their identification. A search for the common poisons, based on a systematic scheme of analysis, will be made on artificially prepared materials. Course *kb* (Quantitative Analysis) or its equivalent is a prerequisite. Optional.

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*Beginning with 1919 this course will be required before entrance to the Medical School. In the meantime all prospective students are urged to include it in their Pre-medical work.

3 afternoons, 2d semester (SWAIN)

[Students enrolled as Medical students will be required to deposit $10 breakage fee for the laboratory course in Physiological Chemistry. Other University students will pay the usual fee of $25.]

IV. DIVISION OF HYGIENE AND PUBLIC HEALTH

†WILLIAM FREEMAN SNOW, Clinical Professor.
RICHARD G. BRODRICK, Assistant Clinical Professor.
WILFRED H. KELLOGG, Clinical Instructor.

1. Hygiene.—This course is divided as follows:

(*a*) Required reading, covering the usual information essential to an understanding of the principles of public health and hygiene;

(*b*) Lectures on organized public health work, covering the administration of federal, state, and local health departments (1st semester);

(*c*) Lectures on Medical Sociology, covering the activities of various types of welfare organizations (2d semester).

The practicing physician's duties and opportunities in the field of preventive medicine are emphasized and illustrated by field trips to quarantine stations and health departments.

1 hour, 6th, 7th, and 8th semesters (BRODRICK, KELLOGG) W 4-5

2. Public Health.—Research work for graduates, or for students registered as candidates for advanced degrees in the Medical Department, may be arranged in connection with investigations of the State Board of Health and the San Francisco Health Department.

(BRODRICK, KELLOGG)

V. DIVISION OF MEDICINE

ALBION WALTER HEWLETT (executive), Professor.
WILLIAM FITCH CHENEY, LANGLEY PORTER, ANDREW WILLIAM HOISHOLT, Clinical Professors.
THOMAS ADDIS, Associate Professor.
HARRY EVERETT ALDERSON, HAROLD PHILLIPS HILL, Associate Clinical Professors.
ERNEST CHARLES DICKSON, WALTER WHITNEY BOARDMAN, HAROLD KNIEST FABER, HENRY HERBERT YERINGTON, Assistant Professors.

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†Absent on leave, 1916-17.

Florence Mabel Holsclaw, Walter Frank Schaller, Julian Mast Wolfsohn, Harry Reeves Oliver, Assistant Clinical Professors.

George De Forest Barnett, Instructor.

William Redwood Price Clark, Thomas George Inman, Arthur Aloysius O'Neill, Clinical Instructors.

William Louis Adams, Millicent Cosgrave, Amelia L. Gates, Anthony Huffaker, Charles Nelson Leach, Henry George Mehrtens, Philip Hale Pierson, Jay Marion Read, Alfred C. Reed, Chester Durbin Sewall, Roland Beatty Tupper, Paul Whelan, Assistants.

Arthur John Ritter, Lecturer on Mental Deficiency.

Robert Eugene Bering, Lecturer on Drug Addictions.

Subdivisions

PEDIATRICS
NEUROLOGY
PSYCHIATRY
JURISPRUDENCE
DERMATOLOGY AND SYPHILIS
ELECTROTHERAPY
ACTINOGRAPHY
TROPICAL MEDICINE
DIETETICS
TUBERCULOSIS

The instruction in Medicine begins in San Francisco in the fourth semester, with practical work in Physical Diagnosis, with lectures and demonstrations in Physical Therapeutics, and with recitations in Medicine and laboratory work in Clinical Pathology. In the fifth and sixth semesters the general field of Medicine is covered by means of clinics, practical demonstration, bedside instruction, and clinical laboratory work. As far as feasible, theoretical and didactic teaching is made secondary to demonstrations and individual work on the part of students. Four hours of the required work in Medicine may be taken in bedside instruction or in advanced work in the subdivisions of Neurology, Dermatology and Syphilis, or Pediatrics. During either the seventh or eighth semesters the student will, in the mornings, attend the clinics at the San Francisco Hospital. Therapeutics will be taught in immediate connection with Medicine.

1. Physical Diagnosis and Introduction to Medicine. — This course lays the foundation for the work in Medicine, and consists largely of practical instruction in the methods of physical diagnosis and in history taking, and in work upon the principles of medicine.

7 hours, 4th semester (Hewlett, Addis, Boardman, Barnett, Dickson, Reed) MF 9-10:30, TTh 9-11

2. Clinical Pathology.—A laboratory period of three hours per week, with some lectures, in microscopical and clinical diagnosis, including the methods of examining blood, urine, sputum, gastric contents, feces, etc.

3 hours, 4th semester (BARNETT) S 9-12

3. Physical Therapeutics.—In this course is given a practical discussion, with demonstrations, of various methods aside from drugs, for the treatment of disease, with particular reference to the physiological problems involved. Hydrotherapy, Balneotherapy, Climatology, Electrotherapy, Bier's Hyperaemia, Gymnastics, and Massage are considered. The technique of venesection, hypodermoclysis, transfusion, etc., is demonstrated.

2 hours, 4th semester (HEWLETT, ADDIS, BARNETT, BOARDMAN, DICKSON) TTh 11-12

4. Medicine.—Five and a half hours per week are spent in the study of Infectious, Metabolic, and Tropical Diseases. Cases are demonstrated and discussed.

5½ hours, 5th semester. (HEWLETT, ADDIS, REED) MF 9-11, M 1:30-3

5. Medicine: Section Work.—On two mornings each week, two hours are spent in section work. The class is divided into three sections and each section takes up in turn (1) the study of thoracic diseases; (2) the study of abdominal diseases; and (3) practical work in the Out-patient Department.

4 hours, 5th and 6th semesters (HEWLETT, ADDIS, BOARDMAN, DICKSON, REED, BARNETT) WTh 9-11

6. Experimental Medicine.—During the second semester of the third year, two hours per week are spent in the discussion of problems in experimental medicine and pathological physiology.

2 hours, 6th semester (HEWLETT, ADDIS, BOARDMAN, DICKSON, BARNETT) M 2-4

7. Medicine: Set Clinic.—Once a week a set clinic for the second-, third-, and fourth-year students is given at Lane Hospital.

1 hour, 4th, 5th, 6th and 7th, or 8th semesters (HEWLETT) Th 11-12

8. Medicine: Ward Work (Lane Hospital).—This consists of eight hours per week of bedside work in Lane Hospital for one-half of one semester. [The senior class is divided into two sections. Section I is assigned to Lane Hospital for the 7th semester, and Section II for the 8th semester. Section I is subdivided into halves, one of which works in the medical ward.] Instead of this course four hours in Medicine 11, 15, 21, 24 may be taken at the option of the student.

4 hours, 7th or 8th semester (HEWLETT, CHENEY)
WTh 9-11, MS 10-12

9. Medicine: Ward Work and Clinics (San Francisco Hospital).—Five hours are given to bedside instruction and there is a set Medical clinic on Saturday forenoon. [The senior class is divided into two sections. Section II is assigned to the San Francisco Hospital for the mornings of the 7th semester, Section I for the 8th semester.]

6 hours, 7th or 8th semester (HILL)
T 8:30-10:30, Th 9-11, WS 9-10

10. Actinography.—Practical Instruction in the Roentgen-Ray Laboratory of Lane Hospital including Radio-Therapy and plate interpretation.

(I) 1 hour, 7th semester; (II) 1 hour, 8th semester
(BOARDMAN) F 3-4

10a. Actinography.—Practical instruction in Fluoroscopy in the Roentgen-Ray Laboratory of Lane Hospital. Optional.

(I) 1 hour, 7th semester; (II) 1 hour, 8th semester
(BOARDMAN) W 8-9

11. Actinography.—Advanced course upon the technique of Roentgen-Ray examinations, with a clinical study of patients from the standpoint of X-Ray examinations. Optional.

2 hours, 7th or 8th semester (BOARDMAN) TTh 4-5

12. Diseases of the Nervous System.—Recitations and demonstrations in the outpatient clinic.

1 hour, 5th semester (SCHALLER) T 9-10

13. Neurology.—Recitations and clinical work in Lane Hospital and the out-patient department.

2 hours, 6th semester (SCHALLER) MT 8:30-9-30

14. Neurology (San Francisco Hospital).—Two hours per week are assigned for the clinical study of the neurological cases in the Stanford wards at this hospital.

(II) 2 hours, 7th semester; (I) 2 hours, 8th semester (WOLFSOHN)
WS 10-11

15. Neurology.—Advanced work in the outpatient department, laboratory and hospitals, for students who have had courses 12 and 13 or their equivalent. Optional.

2 to 4 hours, MWTh mornings (SCHALLER)

16. Psychiatry.—A weekly lecture course preceded by a clinic with demonstration of mental cases in the Stanford ward and from the out-patient department.

1½ hours, 7th semester (HOISHOLT) M 1:30-3

17. Psychiatry.—Continuation of the weekly mental clinic followed by a course of advanced lectures.

1½ hours, 8th semester (HOISHOLT) M 1:30-3

18. Pediatrics.—Recitation and clinical work in the outpatient dement.

2 hours, 5th semester (FABER, PORTER, YERINGTON) M 11-12, T 1:30-2:30

19. Pediatrics.—Recitations covering the general field of Pediatrics, and clinical work in the outpatient department and in Lane Hospital.

5 hours, 6th semester (FABER, PORTER, YERINGTON, HOLSCLAW, LYMAN) M 11-12, F 9-11, 2-3, T 1:30-2:30

20. Pediatrics.—Clinical work in Lane Hospital.

2 hours, 7th semester (FABER, PORTER, YERINGTON, HOLSCLAW, LYMAN) S 10-12

21. Pediatrics.—Advanced work in the outpatient clinic and in Lane Hospital. Optional.

2 to 6 hours, MWTh mornings (FABER, YERINGTON)

22. Cutaneous Medicine and Syphilis.—Two weekly clinical demonstrations and quizzes in the out-patient department of Lane Hospital. This includes a study of the histo-pathology of the skin and special attention is given to diagnosis. This course will be given during the first half of the semester.

(I) 3 hours, first half, 7th semester; (II) 3 hours, first half, 8th semester (ALDERSON) M 10-12, W 11-12

23. Cutaneous Medicine and Syphilis.—Two weekly clinics with demonstrations and quizzes. Special attention is paid to differential diagnosis and to therapy. This course will be given during the second half of the semester.

(I) 3 hours, second half, 7th semester; (II) 3 hours, second half, 8th semester (ALDERSON) M 10-12, W 11-12

24. Cutaneous Medicine and Syphilis.—An advanced course for seniors and physicians. Full opportunity is given for original work. Optional.

2 to 6 hours, 7th or 8th semester (ALDERSON)

25. History of Medicine.—In association with other Divisions a weekly lecture or recitation will be held. The aim will be to have each

Division present that portion of the history of medicine in which it is most interested. The students will be assigned a certain amount of journal and other preparatory work.

1 hour, 8th semester (OPHÜLS, STILLMAN, SPALDING, HEWLETT) T 4-5

26. Dietetics.—A recitation and lecture course of one hour per week.

1 hour, 6th and 8th semesters (HEWLETT) Th 4-5

27. Jurisprudence.—The instruction in this course will be divided among the various Divisions, each one covering the points most essential to it. During 1916-17 lectures in this course were delivered by Professors CATHCART, HUSTON, WHITTIER, and VERNIER of the Stanford Law Department.

1 hour, 7th semester (DICKSON) M 4-5

28. Metabolism.—A course for senior students and others with equal preparation, in the practical study of metabolism. Optional.

4 to 8 hours, 7th semester (ADDIS)

29. Experimental Medicine.—Well equipped laboratories for medical research are available to capable students. The facilities of the wards, the actinographic department, and the dispensary may be used in association with the work. Optional.

(HEWLETT, ADDIS, BOARDMAN, DICKSON)

30. A Special Course will be offered to well trained physicians in the laboratories and the dispensaries and hospitals. Such students may register for advanced degrees, or as "Special Workers."

(HEWLETT, ADDIS, DICKSON, BOARDMAN)

31. Practical Therapeutics and Prescription Writing.—An optional course open to fourth-year medical students, including exercises in prescription writing and in the practical care of patients.

1 hour, 7th semester (HEWLETT) W 3-4

32. Practical Therapeutics.—An optional course similar to 31. Given at the San Francisco Hospital, and open to fourth-year medical students.

1 hour, 7th semester (TUPPER)

33. Serology.—A practical course on Serology and Immunology, study of complement fixation, Wassermann test, etc. Optional.

2 hours, 5th, 6th, 7th, or 8th semester (OLIVER)

Courses 1 to 7, 9, 10, 12, 13, 14, 16, 18, 19, 20, 22, 23, 25, 26, and 27 are required of all candidates for the degree of Doctor of Medicine. In addition four hours are required in any of the following courses: 8, 11, 15, 17, 21, 24, 28.

VI. DIVISION OF OBSTETRICS AND GYNECOLOGY.

Alfred Baker Spalding, Professor.

George Burbank Somers, Clinical Professor of Gynecology.

Henry Augustus Stephenson, Assistant Professor.

George Dunlap Lyman, Assistant Clinical Professor.

Shadworth Oldham Beasley, Henry Walter Gibbons, Frank Robert Girard, Chester Biven Moore, Clinical Instructors.

Joseph Richard Brown, Emmet James Brady, Edmund Butler, Frederick Walter Kroll, Assistants.

The Women's Clinic treats annually over 1000 new patients suffering from all varieties of ailments peculiar to women, and in addition provides for over 500 confinements. This material furnishes an exceptionally good opportunity for practical instruction in the physiology and pathology of the female genital tract. Students attend personally cases of confinement in the Out-patient Obstetrical service.

1. Obstetrics and Gynecology.—Recitations and discussions. For the greater portion of the year the general principles of obstetrics are taken up. During the latter part of the second semester the more essential pathological conditions of Gynecology are considered. Students read from text-books certain assigned topics and discuss with the instructor these subjects. The topics for discussion are illustrated with pathological specimens, clinical histories, manikin demonstrations, etc. For twelve periods the class is divided into three sections for instruction in pelvimetry and manikin exercises.

2 hours, 5th and 6th semesters (Spalding, Stephenson, Moore) MF 8-9

2. Lecture and Demonstration Course.—Covering the subjects of Obstetrics and Gynecology, supplementary to course 1.

1 hour, 5th and 6th semesters, elective (Spalding) W 8-9

3. Histology and Ward Rounds.—The class is divided into two sections. These sections alternate for one-half the year in bedside instruction in the obstetrical ward and instruction in the histology of the female genital tract and the histologic changes induced by pregnancy.

1 hour, 5th and 6th semesters (Spalding, Stephenson) W 3-4

4. Practical Obstetrics.—For periods of two weeks, the senior student is detailed for his entire time as assistant on out-patient Obstetrics. During this period he lives in the Women's Clinic and takes histories, examines antepartum and postpartum patients, attends out-patients in labor, assists the interne with ward patients in labor, witnesses operations, makes daily rounds in the hospital wards, visits the home patients during the puerperal period, and is responsible for certain routine laboratory work.

4 hours, 7th or 8th semester (MOORE)

5. Practical Gynecology.—In this course the class is divided into three sections. Instruction is given in history taking, pelvic examinations, and non-operative treatment in the dispensary; ward rounds; pathological exercises in the laboratory. Groups of four students are detailed in rotation for instruction in the operating room.

2 hours, 7th and 8th semesters (SPALDING, STEPHENSON, MOORE)
W 2-3, F 1:30-2:30

6. Clinical Conference.—Students assisting in operations in course 5 are required to present one month after such experience a complete study of their patient, with a short review of the recent literature bearing upon the condition for which the patient was operated. These papers are discussed by the clinical staff and members of the senior class.

1 hour, 7th and 8th semesters (SPALDING, and clinical staff)
M 1:30-2:30

7. Special Courses in Cystoscopy, in Gynecological Diagnosis, and in Practical Obstetrics, will be arranged for individual students. The Women's Clinic and the laboratory of Obstetrics and Gynecology are open throughout the year to properly qualified students who wish to work in Obstetrics and Gynecology. At the San Francisco Hospital a course somewhat similar to course 5 is offered for small groups of students. A course in the Women's Clinic is offered to women students who wish to substitute for the course in Genito-Urinary Surgery.
(Clinical Staff)

VII. DIVISION OF PATHOLOGY

WILLIAM OPHÜLS, Professor.
ELMER WILLIAM SMITH, Assistant.

1. General Pathology.—A course of lectures, demonstrations, and laboratory work which, following a general introduction into the field of Pathology, covers disturbances in circulation, regressive and progressive tissue changes, inflammation, and tumors. The study of human material will be supplemented by experiments. Two lectures and three laboratory periods of two and a half hours per week.

9½ hours, 4th semester (OPHÜLS) MWF 1:30-4; TTh 8-9

2. General Pathology.—An elective course of weekly recitations covering the same ground as course 1.
1 hour per week (elective), 4th semester (———)

3. Special Pathology.—A course of demonstrations of fresh and preserved, gross and microscopic specimens illustrating selected chapters of Gross Morbid Anatomy. Part of the time will be devoted to the technique of post-mortem examinations. Diagnostic work will be done in the 6th semester.
4 hours per week, 5th and 6th semesters (OPHÜLS)
Th 2-4; S 10-12

4. Advanced Work in Special Pathology.—An elective course in Special Pathology is offered to students who have taken course 1. Students taking this course will assist at necropsies whenever possible. They are required to work up the histological or bacteriological problems connected with the necropsies which they attend. For this work they will be given the facilities of the laboratory. Elective. (OPHÜLS)

5. Experimental Pathology.—An elective course open to students who have completed General Pathology (course 1). In this course infectious diseases will be taken up from an experimental point of view, and special attention will be given to those which are common to man and animals, or which may produce lesions in animals. Students will have an opportunity to watch the development of such diseases in animals, and the lesions will be studied at autopsy. Methods in common use for the diagnosis of infectious diseases by means of laboratory experiments will be taken up.
2 hours per week (elective), one semester (———)

6. Research Work in the Pathological Laboratory.—Students wishing to do special work in the Pathological Laboratory should have finished course 1. They should consult with the executive of the Division in regard to the selection of a proper subject for investigation. As the laboratory accommodations are limited, students must do a reasonable amount of work, otherwise the privilege will be withdrawn. A deposit of $10 will be required to cover such material as is used by the student in the course of his work. Such part of this as is not drawn against will be refunded on the completion of the work undertaken. Work may be undertaken during the summer vacation. The same regulations apply to work on theses or for advanced degrees in the Division, except that in the latter case the student also should have finished course 3. (OPHÜLS)

VIII. DIVISION OF PHARMACOLOGY

ALBERT CORNELIUS CRAWFORD, Professor.
CHARLES GEORGE MACARTHUR, Assistant.

1. Pharmacology and Materia Medica.—In the course in Pharmacology emphasis is placed on laboratory work. This requires three hours weekly during the fourth semester. In this course the student performs for himself, or has demonstrated to him by the other members of the class, the important experiments which illustrate the fundamental principles of pharmacology, and sees one or more experiments on all of the more important drugs. The relation of the laboratory work to rational therapeutics is constantly kept in mind. The lecture course embraces two hours weekly during the fourth semester, with one weekly conference or demonstration. During the fifth semester the work consists of lectures and recitations. In connection with the course in Pharmacology a short course in prescription writing is given.
(*a*) 6 hours, 4th semester; (*b*) 3 hours, 5th semester (CRAWFORD)
(*a*) T 1:30-4:30, W 9-10:30, Th 1:30-3; (*b*) MW 1:30-3

2. Graduate Course.—The laboratory is open throughout the year to properly qualified students who wish to carry on independent work in Pharmacology.

(CRAWFORD)

3. Pharmacy.—A short optional course of demonstrations in pharmacy will be given. This will enable the student to understand better the advantages and dangers of combining drugs.

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IX. DIVISION OF PHYSIOLOGY

OLIVER PEEBLES JENKINS, Professor, Emeritus.
ERNEST GALE MARTIN (executive), FRANK MACE MCFARLAND, Professors.
CLARA S. STOLTENBERG, Associate Professor.
JAMES ROLLIN SLONAKER, FRANK WALTER WEYMOUTH, Assistant Professors.

[The numbers of the courses correspond to those under the individual Department, pp. 242-246.]

2. Physiology of Muscle and Digestion.—An experimental course covering the ground represented in Foster's Physiology, or Howell's Text-book on the same subjects. (Two lectures and five laboratory hours per week.)
4 units, 1st semester (MARTIN, SLONAKER)

3. Physiology of Blood and Circulation, Respiration, Elimination of Wastes, Metabolism, and Nutrition.—Follows course 2. An experimental course, covering the ground represented in Howell's Textbook. (One lecture and five laboratory hours per week.)
4 units, 2d semester (MARTIN, SLONAKER)

4. Anatomy and Histology of the Sense Organs.—The course is planned to accompany course 5, the two being designed to give the gross and minute anatomy of the central nervous systems and sense organs. The texts necessary for the student's use are Quain and Barker. (One lecture and five laboratory hours per week.) Optional.
3 units, 2d semester (STOLTENBERG)

5. Structure of the Nervous System.—The course consists of the dissection and comparative study of a series of vertebrate brains, including the human brain and cord, also the peripheral nervous system; abundant material is provided, also such necessary helps as the latest models and charts. For texts the student will use Quain, Edinger, and Barker. (One lecture and five laboratory hours per week.)
3 units, 1st semester (STOLTENBERG)

6. Physiology of the Nervous System and Sense Organs.—An experimental course in these subjects, designed to follow courses 4 and 5. Texts: Foster, Howell's Text-book. (One lecture and five laboratory hours per week.)
3 units, 2d semester (WEYMOUTH)

8. Advanced and Research Courses in Physiology and Histology are open to those who are qualified to take them up.

9. Histology.—The study of the structure of the cell and its modes of reproduction, the pithelial, muscular, nervous, and connective tissues, and the outline of their development in a comparative way, occupy the first semester. During the second semester the structure of the blood and lymph, and the microscopic anatomy of the organs, are dealt with. Text required: Quain-Schäfer's Microscopic Anatomy. Elementary histological technique is taught during the course. In the second semester an opportunity is offered for a limited number of students to register for an extra unit, which is devoted to more extended histological technique. Prerequisite for course 9: course 2 or its equivalent. (One lecture and five laboratory hours per week.)
3 units, both semesters (McFARLAND)

[Courses 2, 3, 5, 6, and 9 required of all Medical students.]

14. Journal Club.—Students in the advanced classes will be expected to meet once a week to discuss current literature in Physiology and Histology. Optional.
1 unit, 2d semester (DEPARTMENT FACULTY)

X. DIVISION OF SURGERY

Adolph Barkan, Professor, Emeritus.

Stanley Stillman (executive), Emmet Rixford, Professors.

Leonard W. Ely, Associate Professor.

Rufus Lee Rigdon, Albert Brown McKee, Edward Cecil Sewell, Clinical Professors.

Frank Ellsworth Blaisdell, John Francis Cowan, Assistant Professors.

Leo Eloesser, Harrington Bidwell Graham, George Rothganger, Assistant Clinical Professors.

Francis Thomas Williams, Instructor.

Hans Barkan, James Eaves, Philip K. Gilman, Harry Leslie Langnecker, Harvard Young McNaught, Caroline Palmer, Clinical Instructors.

Howard Felix Adler, John Robert Burrows, James Root Dillon, Sylvan Lewis Haas, Ross Wallace Harbaugh, Clarence Elmer Hyde, Lester O. Kimberlin, Josiah H. Kirk, Carl Frederick Larson, Peter Harrison Luttrell, James Hugh McClelland, William O. Montgomery, Harold Staats Moore, Chester Howard Woolsey, George S. Wrinkle, Assistants.

Subdivisions

OPHTHALMOLOGY GENITO-URINARY DISEASES ORTHOPEDICS

OTOLOGY, RHINOLOGY, AND LARYNGOLOGY

Instruction in Surgery begins in the fourth semester, with recitations and demonstrations in General Surgery, *i. e.*, the principles of surgery, surgical pathology, and the surgical diseases, together with recitations and demonstrations in fractures and dislocations. The systematic textbook and lecture work in Regional Surgery is completed in the sixth semester. As far as possible clinical demonstrations will take the place of formal lectures. The work of the seventh and eighth semesters is essentially clinical, the general field being covered by means of clinics, practical demonstrations, bedside instruction, individual clinical investigation, and work in the laboratory of Surgical Pathology.

1. **General Surgery** (Surgical Pathology and Principles of Surgery.)—Recitations, demonstrations, and laboratory work, utilizing clinical and pathological material from the out-patient clinics and Lane Hospital, and preparations from the museum and laboratory of Surgical Pathology.

1½ hours, 4th semester (Stillman, Cowan, Gilman)

M 10:30-12

2. Fractures and Dislocations.—Recitations, study of X-Ray plates, and demonstrations of fractures and dislocations. All the important fractures and dislocations are produced on the cadaver and subsequently demonstrated by dissection.

3 hours, 4th semester (ELY, ELOESSER, BLAISDELL, COWAN)
WF 10:30-12

3. Regional Surgery.—Recitations and demonstrations in diseases of the extremities and certain affections of the head and neck.

2 hours, 4th semester (COWAN) WF 4-5

4. Regional Surgery.—Recitations, demonstrations, and discussions on diseases of the abdomen.

3 hours, 5th semester (STILLMAN) M 4-5, F 3-5

5. Regional Surgery.—Recitations, demonstrations, and discussions on diseases of the head, neck, and thorax not included in course 3, with special attention given to the surgery of the brain and spinal cord.

2 hours, 6th semester (RIXFORD) MF 4-5

6. Surgical Pathology.—A laboratory course in which surgical problems are considered from the standpoint of Pathology. Special attention is given to the study of tumors and gross specimens from the out-patient clinic and hospital operating rooms.

2 hours, 5th and 6th semesters (ELY, COWAN, GILMAN)
T 2:30-4:30

7. Surgical Clinics and Section Work.—In this course operative clinics are given twice a week in the amphitheatre, quizzes and demonstrations in the out-patient clinics, and bedside instruction and history taking in the surgical wards of Lane Hospital. As far as practicable the operative clinics are limited to cases which have been previously studied by the student either in the medical or surgical wards or in the out-patient clinics. *Anesthetics.*—In connection with the clinical work the students are assigned in rotation so that each one shall administer ten anesthetics under the supervision of Dr. Caroline Palmer, the anesthetist at Lane Hospital. Dr. Palmer also gives a course of four lectures on the administration of anesthetics.

5 hours, 5th semester; 4 hours, 6th semester (STILLMAN, COWAN, ROTHGANGER)
5th sem.: T 10-11, TWF 11-12, S 8:30-9:30
6th sem.: T 10-11, TW 11-12, S 8:30-9:30

8. Surgery: Ward Work and Clinics.— Out-patient Clinics and Lane Hospital. (The senior class is divided into two sections. Section I is assigned to Lane Hospital for the mornings of the 7th semester, and Section II for the mornings of the 8th semester.) Formal clinics are given once per week. Senior students are privileged to assist in operations and in the dressing of cases both in the out-patient clinics and hospital wards. One hour per week of this course may be devoted to courses 13, 14, 15, 16, 17, 18, at the option of the student.

3 hours, 7th or 8th semester (STILLMAN) T 10-12, S 8:30-9:30

9. Surgery: Ward Work and Clinics.—San Francisco Hospital. (Section II of the senior class is assigned to the San Francisco Hospital for the mornings of the 7th semester and Section I for the mornings of the 8th semester.) Three hours per week are spent either in the wards or operating room, and there is a set surgical clinic once per week. One hour per week of this course may be devoted to optional courses in Surgery.

4 hours, 7th or 8th semester (RIXFORD, ELOESSER, HARBAUGH)
MF 8:30-10:30

10. Ophthalmology.—Demonstrations, lectures, recitations, and clinics. This course covers in a practical way the general field of diseases of the eye. Instruction is given in the use of the ophthalmoscope, perimeter, etc. Operations are performed both in Lane Hospital and the out-patient clinic.

(II) 4 hours, 7th semester; (I) 4 hours, 8th semester.
(MCKEE, BARKAN) TTh 2-4

11. Otology, Rhinology, and Laryngology.—Demonstrations, recitations, and clinics. The diseases of the ear, nose, and throat are covered in a general way, and the practical use of the important diagnostic instruments is taught. Operations are performed both in the amphitheatre and in the out-patient clinic.

(I) 4 hours, 7th semester; (II) 4 hours, 8th semester
(SEWALL, GRAHAM, MCNAUGHT) TTh 2-4

12. Genito-Urinary Surgery.—Recitations, quizzes and clinics. This course includes practical work in the out-patient clinic and training in the use of the urethroscope and cystoscope. Special attention is devoted to investigation of the upper urinary tract. Operative clinics are held once a week.

3 hours, 7th or 8th semester (RIGDON, WILLIAMS) MF 8:30-10

13. Orthopedic Surgery.—Clinics and demonstrations. This course covers the general field of Orthopedic Surgery, and is given in Lane Hospital, and in the out-patient department.

2 hours, 7th or 8th semester (ELY) F 10-12

14. Operative Clinic.—An operative clinic for senior students and qualified physicians is held once per week. Optional.

2 hours, 7th and 8th semesters (STILLMAN)

15. Out-patient Clinics.—In this course opportunity is afforded senior students and qualified physicians of examining cases and of doing dressings, bandaging, and minor operations in the out-patient clinic, under instructions of the assistants. Optional.

Three mornings per week, 7th and 8th semesters
(ROTHGANGER, HYDE, ADLER, KIMBERLIN, LARSON)

16. Operative Surgery.—A course of operative surgery on the cadaver in which the student performs or assists in performing most of the classical surgical operations. Optional.

7th or 8th semester (EAVES)

17. Refraction.—A practical course in Physiological Optics and Refraction open to senior students and physicians. Optional.

1 hour, 7th or 8th semester (MCKEE)

18. Advanced Ophthalmology. — Clinical work in the Out-patient Clinic and Lane Hospital open to senior students and physicians. Optional.

2 to 6 hours, 7th or 8th semester (MCKEE)

19. Advanced Otology, Rhinology, and Laryngology.—Clinical instruction for advanced students, including surgical operations. Optional.

2 to 4 hours, 8th semester (SEWALL, GRAHAM, MCNAUGHT)

In connection with the above course, through the co-operation of the various clinics and laboratories, opportunity is offered advanced students and physicians to make a special study of functional testing of the ear, tubercular lesions of the larynx, anatomy of the ear, nose, and throat, special bacteriology of the upper respiratory tract, Roentgen-Ray diagnostic methods, and of performing operations upon the cadaver.

(SEWALL, GRAHAM, MOORE, BLAISDELL, DICKSON, BOARDMAN)

20. Special courses will be offered to well trained physicians in the laboratory of Surgical Pathology and in the out-patient clinic and hospitals. Such students may register for advanced degrees or as Special Workers.

(STILLMAN, RIXFORD, BLAISDELL, ELY, COWAN)

THE MEMORIAL CHURCH

The Rev. David Charles Gardner, Chaplain.
Louis H. Eaton, Organist.

Morning prayers are said daily at 8 a.m., followed by a short address. In this service students take part. Divine service is held on Sunday morning at 11 o'clock.

Special Preachers and Lecturers for 1916-17

The Rev. Charles W. Gilkey, minister of the Hyde Park Baptist Church, Chicago. Three sermons in Memorial Church, September 10th, 17th, and 24th. Three University lectures on the Religious Significance of the Personality of Jesus, September 12th, 14th, and 20th.

The Rt. Rev. Charles Henry Brent, D. D., Bishop of the Philippine Islands. Three sermons in Memorial Church, November 19th, 26th, and December 3d. Two University lectures on (1) America's National Mission and (2) The Mohammedans of the Philippines, November 23d and 26th.

The Rev. Harry Emerson Fosdick, D. D., Professor in Union Theological Seminary. Three sermons in May.

The following named clergymen have been invited by the Chaplain to occupy the pulpit for one Sunday each during 1916-17:

January 28. The Rev. H. H. Powell, D. D., Episcopalian, San Francisco.
February 4. The Rev. Bishop Adna W. Leonard, Methodist, San Francisco.
February 11. The Rev. William Horace Day, Congregationalist, Los Angeles.
February 18. The Rev. John Hardgrove Boyd, D. D., Presbyterian, Portland, Oregon.
February 25. The Rev. John Douglas Adam, D. D., Presbyterian, Hartford, Conn.
March 4. The Rev. John Freeman, Presbyterian, Pasadena.
March 11. The Rev. Russell F. Thrapp, Christian, Los Angeles.
March 18. Rabbi Martin A. Meyer, Hebrew, San Francisco.
March 25. The Rev. Caleb L. Dutton, Unitarian, San Francisco.
April 15. The Rev. Francis J. Van Horn, D. D., Congregationalist, Oakland.
April 22. The Rev. Burton M. Palmer, D. D., Congregationalist, Pacific Grove.

UNIVERSITY CHOIR

LOUIS H. EATON, Organist and Director.

The Choir sings at the morning service each Sunday in Memorial Church, the music consisting of anthem, chant, and hymns.

Rehearsal Th 7:35 1 unit of credit per semester

During the second semester a large separate choir is formed for the performance of one of the great oratorios,—in 1916-17, Mendelssohn's "St. Paul."

Rehearsals as arranged 1 unit of credit

MILITARY TRAINING

JENS BUGGE, Major, U. S. Army, Retired, Professor.
AUGUST BARTELS, First Sergeant, U. S. A., Retired.
GEORGE H. BATES, Sergeant, U. S. Infantry, E. H. JEWELL, Sergeant, U. S. Infantry, Instructors.

Beginning with the academic year 1917-18 physical or military training will be required of all undergraduates during their first two years of residence.

1. Military Training.—Physical drill, Butt's Manual; infantry drill, including the school of the battalion; bayonet combat; field engineering: intrenchments on the sand table and also on the ground; map reading, by use of sand table and maps; target practice: preliminary drills in aiming, sighting and position, fire direction and control, gallery practice and range practice; first aid, personal hygiene, and camp sanitation lectures; security: talks on patrolling, outposts, advance and rear guards, with practical illustrations; combat, including the handling of a battalion in attack and defense, with practical illustrations; special talks: military policy of the United States, organization, supply, artillery and machine guns, cavalry and aeroplanes. (Three to six hours per week.)

1 to 2 units, both semesters (BUGGE, BARTELS, BATES, JEWELL)
MWF 11-12; 4:15-6:15

PHILOSOPHY

HENRY WALDGRAVE STUART, Professor.
HAROLD CHAPMAN BROWN, Assistant Professor.

[Courses 1 and 7 only are open to first-year students; courses 1 to 5 inclusive presuppose no previous work in the department.]

1. Elementary Logic.—The principles of Deductive and Inductive

Logic, with special attention to the important types of fallacy.

3 units, 1st semester (STUART, BROWN) MWF 9

2. **Elementary Ethics.**—A short survey of the main characteristics of primitive as compared with more developed forms of morality. The important historic theories as to the criterion for good conduct. The working principles of good conduct.

3 units, 1st semester (STUART) MWF 10

3. **History of Philosophy.**—The development of philosophical theories from the early Greek period to the end of the eighteenth century in Germany, with a brief outline of philosophical movements in the nineteenth century. Attention will be given throughout to the relations of philosophy with social and political conditions and with science, literature, and religion.

3 units, both semesters (BROWN) MWF 8

4. **Modern Scientific Conceptions of Nature and Mind.**—A study of current views of cosmic structure and the place of man and his activities in nature, in the light of recent developments in physical chemistry, evolutionary biology, and psychology.

3 units, 2d semester (BROWN) MWF 11

5. **Esthetics.**—The origins and nature of art. Its significance for religion, morality, and social life. The rise of art forms. Contemporary theories of esthetics.

3 units, 2d semester (BROWN) [Not given in 1916-17.]

6. **Philosophy of the Nineteenth Century.**—The development of philosophical problems in France, Germany, and England will be studied in successive years in relation to the particular national genius and the conditions under which they arose. The topic for 1916-17 will be French philosophy since the revolution. Prerequisite: course 3, or special permission of the instructor for suitably qualified third- or fourth-year students.

2 units, 2d semester (BROWN) TTh 10

7. **Advanced Logic.**—Methods of investigation in use in the natural and social sciences, and the cardinal assumptions and principles on which these methods are based. Prerequisite: course 1 or an equivalent.

3 units, 2d semester (STUART) MWF 9

8. **The Social Order and the Individual.**—Insect and animal "societies" and the types of human social organization. Social authority and individual initiative. The political obligations of the individual and the ethical basis of political institutions and of law. Democracy,

aristocracy, and absolutism. A continuation of course 2; open on approval to students otherwise qualified.

3 units, 2d semester (STUART) MWF 10

9. Religion.—The psychological and social origins of religion. The relations of religion to science, to morality, and to philosophy. The distinctive content and characteristics of the great religions. Prerequisite: course 2, 3, or 4, or an equivalent.

3 units, 1st semester (STUART) TTh 10

10. Outlines of General Philosophy.

2 or 3 units, both semesters (STUART) [Not given in 1916-17.]

11. Seminary.—(*a*) *Theories of Consciousness.* William McDougall's "Body and Mind" will be used as a basis for the study of contemporary thought on the nature and significance of consciousness.

1st semester (BROWN) By arrangement

(*b*) *Contemporary Realism.* "The New Realism" (Macmillan, 1912) and certain writings of Bertrand Russell will be the principal material for a study of the logical and ethical tendencies of this movement. A continuation of the above.

2d semester (STUART) By arrangement

PHYSICAL TRAINING

MEN

HERBERT ROWELL STOLZ, Assistant Professor of Physical Training and Personal Hygiene.

WILFRED HARRY MALONEY, ERNEST BRANDSTEN, ERNESTO RAY KNOLLIN, Instructors.

It is the aim of the Department of Physical Training to afford the opportunity for pleasurable and beneficial exercise for the men of the University. The maintenance of the gymnasium and the swimming pool is dependent upon the student fees administered by the director, and those who pay this fee should share in the responsibility of seeing that property which is kept up at their expense is not carelessly destroyed or damaged. On the other hand, thoughtful suggestions for the improvement of the gymnasium administration will always be welcomed and carefully considered.

LOCKERS.—Every man who has paid the gymnasium fee is entitled to a locker. A deposit of fifty cents is required on every key; this deposit is payable only at the Business Office. In the event of a key being lost a duplicate will be furnished at a cost of twenty-five cents. In case a key is mislaid or forgotten an assistant will open the locker with a pass-key but no duplicate key will be given out for temporary use.

Towels.—The payment of the gymnasium fee entitles the student to the use of towels. A ticket for the first towel may be obtained in the office and thereafter a used towel may be exchanged for a fresh one whenever the towel booths are open. Towels may only be obtained in person. In case the last towel is not returned the locker key deposit will not be refunded.

Library.—A library of books upon sport, hygiene, and physical training is maintained in the office and is available for the use of the men of the University. It is especially requested that the books be carefully handled and replaced upon the shelves. The books are not to be taken away from the library.

Physical Training.—Beginning with the academic year 1917-18 physical (or military) training will be required of all undergraduates during their first two years in the University. The aim will be to conduct regular exercises for organized classes and corrective exercises for individuals and to stimulate widespread interest in all forms of athletics. With the help of the associated students provision will be made for adequate instruction for individuals as well as for the various athletic teams.

Enrollment.—Enrollment in physical training classes takes place from 9:00 a.m. till noon and from 2:00 p.m. till 6:00 p.m. on the Wednesday and Thursday following the first day of registration in each semester. The physical training is arranged upon a group system, each group containing one or more forms of exercise. The choice among these groups is only restricted by the student's inability to fit the prescribed exercise periods into his schedule of university work. Enrollment must be completed and a group finally selected within two weeks from the first day of each semester.

Regulation Gymnasium Suit.—Those who are enrolled in physical training are expected to report for exercise in the regulation gymnasium suit, which consists of white sleeveless cotton shirt; unbleached canvas running pants with belt straps; grey stockings; white gymnasium shoes.

Swimming Pool Regulations.—The swimming pool has been constructed by the Board of Control for the Associated Students; the Board of Trustees has contributed toward the cost of the purification plant. The cost of equipment, maintenance, and instruction is met by the gymnasium fees.

Every man who has paid his student body dues is entitled to use the pool under the conditions decided upon by the Executive Committee of the Associated Students and the Director of Physical Training.

For the maintenance of a healthy pool it is absolutely necessary that all the men using it take a personal interest in its cleanliness. Any man who enters the pool while suffering from an infectious disease is endangering the health of all the users. Every man is expected to take a shower bath before entering the pool.

Swimming Pool Schedule.—On week days the pool is reserved for class instruction as follows: 11:30 a.m. to 12 noon; 2:00 p.m. to 3:00 p.m.; 4:00 p.m. to 5:30 p.m; at other hours during the week and from 9:00 a.m. until 5:00 p.m. on Saturdays the pool is open to the members of the student body.

Medical Advice.—As a part of his registration every student is required to keep the appointment which is given him for a medical examination. The object of this examination is to ascertain the general health of each man and to afford a basis for advice concerning exercise and study.

The medical adviser does not undertake the treatment of disease but he stands ready at any time to help in the case of accident or minor injury and to advise with students concerning their health.

Special classes and individual instruction are given to those who require corrective exercises and who will co-operate in the work.

Instruction.—Expert instruction is offered in rugby football, soccer football, basketball, track athletics, swimming, boxing, fencing, wrestling, gymnastics, athletic dancing, and corrective exercises. Those who are interested in tennis, baseball, indoor soccer, floor hockey, and indoor baseball, are urged to co-operate in securing regular competitions in these games both within the University and with outside teams.

PHYSICAL TRAINING AND PERSONAL HYGIENE

ROBLE GYMNASIUM

Clelia Duel Mosher, Assistant Professor and Director.
Florence Cotten Burrell, Etta L. Paris, Instructors.
Harry Wilfred Maloney, Teacher of Fencing.
Greta Johannsen, Life Saver and Teacher of Swimming.
Inezetta Holt, Gymnasium Assistant.

Beginning with the academic year 1917-18 physical training will be required of all undergraduates during their first two years in the University.

The aim of Roble Gymnasium, as a laboratory of personal hygiene, is to improve the standard of physical health of the women and to increase their mental and physical efficiency; to encourage the habit of exercise; and to stimulate a widespread interest in physical activity of all kinds, especially in those forms which will be available to the women after leaving college. This will be accomplished by conducting organized classes, with instruction for individuals as well as for the various teams.

Every encouragement will be given, as heretofore, to women who wish to come to the Gymnasium or any of the out-of-door classes irregularly; but the hours chosen must not interfere with the progress of those who come regularly.

On Fridays special emphasis will be laid on the recreational side of Physical Training. Folk dancing, swimming, tennis, and games will be offered with special reference to those who care to come only once a week.

Dress: black bloomers with white middy blouse and rubber soled regulation gymnasium shoes are needed for classes in the gymnasium and athletic fields. Ballet slippers are needed for all dancing classes except the Friday folk dancing.

1. **Physical Training and Personal Hygiene.**—Two or more hours per week, in the gymnasium or its open-air divisions.

Gymnastics, Elementary	MW 11
Gymnastics, Advanced	TTh 4:30
Dancing, Elementary Gymnastic	TTh 10, MW 4
Dancing, Intermediate	MW 4
Dancing, Advanced	TTh 11
Folk Dancing	F 11
Social Dancing	F 4:30
Fencing, Elementary	MWF 4:30
Fencing, Advanced	TTh 11
Swimming	MTWThF 10, 11, 4:30, 8 (p.m.)

SPORTS	1ST SEMESTER	2D SEMESTER
Baseball	MWTh 4:30	
Tennis, Elementary	TWF 11, TW 4:30	TWF 11, TW 4:30
Tennis, Advanced	MThF 11, 4:30	MThF 11, 4:30
Volley-ball and Field Sports	F 11, 4:30	F 11, 4:30
Basketball		MWTh 4:30
Boating		MWTh 11, 4:30

2. Personal Hygiene.—Two lectures per week. Open to all women students. Required of all women taking courses 3 to 6.
2 units, 2d semester (MOSHER) [Not given in 1916-17.]

3. Physical Training Theory.—Open only to students who have had Elementary and Advanced Gymnastics, Personal Hygiene 2, Zoology 10, or Anatomy.
2 units, 1st semester (PARIS) TTh 3:05

4. Practice Teaching.—Two hours per week. Open to students who have had course 3.
1 unit, 2d semester (PARIS) TTh 3:30

5. The Theory and Teaching of Athletic Plays and Games.—Open only to students who have had one or more years of Physical Training 1, and Personal Hygiene 2.
2 hours, 2d semester (BURRELL) By arrangement

6. Supervision of Children's Play.—Three hours per week. Open only to students taking course 5.
1 unit, each semester (BURRELL)

Women who purpose attending later a School of Physical Training as preparation for being directors of Physical Training or supervisors of playground work, should take the subjects listed below in addition to the courses offered in this department. Such students will find it advantageous to major in Zoology; if other majors are desired, students are requested to consult the Director.

ZOOLOGY.—1. Elementary. (3 units, both semesters)
4. The Vertebrates (field work). (2 units, both semesters)
8. Microscopical Anatomy. (2 units, 1st semester)
11. Embryology. (2 units, both semesters)

ANATOMY—1. Osteology. (2 or 3 units, 1st semester)
2, 3, 4. Dissections of (2) Head, Neck, Thorax, (3) the Upper Extremity, (4) Lower Extremity and Abdomen. (2 to 5 units or more)
5. Topographical Anatomy.

PHYSIOLOGY.—2. Muscle and Digestion. (4 units, 1st semester)
3. Blood and Circulation, Respiration, Elimination of Wastes, Metabolism, and Nutrition. (4 units, 2d semester)
PSYCHOLOGY.—1. Elementary Psychology. (4 units, 1st semester)
BOTANY.—11. Field Botany. (1 unit, both semesters)
ENTOMOLOGY.—1. Elementary. (3 units, either semester)
ENGLISH.—Vocal Expression. (3 units, either semester)
ECONOMICS.—1. Elements. (3 units, both semesters)
MECHANICAL ENGINEERING.—5. Woodworking.
(2 exercises a week, one semester)

PHYSICS

Fernando Sanford, Professor.

Frederick John Rogers, Associate Professor.

Elmer Reginald Drew, Joseph Grant Brown, Perley Ason Ross, Assistant Professors.

[2]Ittai A. Luke, Edward Everett McCabe, Dayton L. Ulrey, Pearl M. Weeks, Assistants in Instruction.

[Courses 1, 2, 3, 4, and 5 constitute a course in General Physics, and are intended to precede the advanced courses.]

1. Dynamics.—Including hydrostatics and pneumatics. Open only to students who have had algebra and plane geometry. Required as a preparation for each of the courses following (except 6 and 7). Two lectures and two laboratory periods per week.

4 units, either semester (Ross)

Lec. TTh 9; Lab. WThF 1:05-4:05

2. Electricity and Magnetism.—Three laboratory periods per week, which will include two hours of lecture and discussion. Prerequisite: course 1, or an equivalent.

4 units, 1st semester (Drew) WThF 1:05-4:05

3. Heat.—One lecture and two laboratory periods per week. Prerequisite: course 1.

3 units, 2d semester (Ross) Lec. W 1:30; Lab. MT 1:05-4:05

4. Sound.—Including wave-motion. Three laboratory periods per week. Prerequisites: course 1, and trigonometry.

3 units, 1st semester (Brown) Lab. MTW 1:05-4:05

5. Elementary Optics.—Three laboratory periods per week. Prerequisites: course 1, and trigonometry.

3 units, 2d semester (Brown) Lab. WThF 1:05-4:05

6. General Physics.—A course intended primarily for students in Engineering but open to others who have had equivalent preparation. Three experimental lectures and recitations and one laboratory period per week. Prerequisite: entrance Physics, and course 3 in Applied Mathematics, or may be taken concurrently with the latter.

a. Heat, Light, and Sound.

4 units, 1st semester (Brown)

Lec. MWF 11; Lab. W or Th or F 1:05-4:05

b. Electricity and Magnetism.

4 units, 2d semester (Rogers)

Lec. MWF 11; Lab. W or Th or F 1:05-4:05

7. General Physics.—A non-mathematical course intended primarily for students in Biological Science and students preparing for the study of Medicine, but open to others. Two lectures and two laboratory periods per week throughout the year.
4 units, both semesters (Drew)
Lec. MW 9; Lab. (I) MT 1:05-4:05 (primarily for pre-medical students), (II) TTh 9-12.

8. Mechanical Measurements.—A course in exact measurements of mass, length, time, gravity, elasticity, surface tension, etc., using balance, dividing engine, cathetometer, chronograph, etc. Two laboratory periods per week. Prerequisite, course 1.
2 units, 2d semester (Brown) Lab. MT 1:05-4:05

9. Electrical Measurements.—Open to students who have taken course 2 or course *6b*. Students who have not taken or completed *6b* are expected to register for more than two units.
2 or 4 units, 1st semester (Rogers)
Lab. (I) TTh 9-12, (II) MT 1:05-4:05

9a. Photometry and Illumination.—Open to students who have completed course 9.
1 unit, 2d semester (Rogers) By arrangement

10. Advanced Optics.—Two laboratory periods per week. Prerequisite, course 5.
2 units, 2d semester (Sanford) Lab. ThF 1:05-4:05

11. Advanced Physics.—Lectures. Prerequisites, courses 1, 2, 3, 4, and 5, or their equivalent.
5 units, both semesters (Sanford) MTWF 11, Th 9

12. Analytic Mechanics.—Lectures. Prerequisites, course 1 and the Differential and Integral Calculus.
4 units, 1st semester (Ross) By arrangement

13. Teachers' Course in Elementary Physics.—Prerequisites: courses 1, 2, 3, 4, and 5, or their equivalent.
1 unit, both semesters (Sanford) F 10

14. Advanced Heat.—Lectures on selected topics, including the elements of Kinetic Theory and Thermodynamics. Prerequisites: courses 1 and 3, and calculus.
3 units, 2d semester (Drew) By arrangement

15. Vibratory Motion and Wave Motion.—Recitations and lectures illustrated by occasional lecture experiments and a few carefully executed laboratory experiments. Prerequisites: courses 1 and 12, or their equivalent, and calculus.
2 units, both semesters (Rogers) TTh 8

16. The Literature of Physics.—A reading course open to students who have the preparation required for Physics 11. A general review of the literature of Physics, especially journal literature.

2 units, either semester (SANFORD) TTh 10

18. Advanced Electricity.—Recitations and lectures illustrated by occasional lecture experiments and a few carefully executed laboratory experiments. Prerequisites: courses 2 or *6b*, 9, 12, and calculus.

3 units, both semesters (ROGERS) MWF 9

19. Investigation of Original Problems in the Laboratory.—Hours to be determined in each case.

(SANFORD) By arrangement

For graduation in the department the minimum requirement is 40 units of Physics and Chemistry, of which at least 30 units must be Physics. All elementary courses except 6 and 7 are suitable for Physics majors.

The TEACHER'S RECOMMENDATION.—The minimum requirement is courses 1, 2, 3, 4, 5, or an equivalent, and course 13.

LABORATORY FEES.—Courses 1, 2, 3, 4, 5, 7, 8, and 10, $4 each per semester; course *6a* and *6b*, $3 each, per semester; course 9, $5 per semester; course 19, $2 per unit per semester.

PHYSIOLOGY AND HISTOLOGY

ERNEST GALE MARTIN, FRANK MACE MCFARLAND, Professors.

CLARA S. STOLTENBERG, Associate Professor.

JAMES ROLLIN SLONAKER, FRANK WALTER WEYMOUTH, Assistant Professors.

GEORGE RAYMOND COWGILL, WILLIS HORTON RICH, Assistants in Instruction.

UNDERGRADUATE COURSES

1. General Anatomy and Physiology.—This course is designed to give a general view of the laws of the structure and the activities of organisms. It includes the study of the cell and its activities as shown in the unicellular organisms, and in individual cells of multicellular organisms; the relation of cells to their environment, with special reference to the principle of adaptation; the chemical basis of life processes as exemplified in plants and animals; reproduction, growth, and heredity; an introduction to biological history, with reference to the relationships of organisms as exemplified by paleontology, embryology, and comparative anatomy; and the principles concerned with the distribution of organisms on the earth. Use is made throughout the course of illustrative material drawn from the plant and animal kingdoms as occasion suggests. Particular attention is paid to the application of the principles studied to the human being. (One lecture and five laboratory hours per week.)

3 units, both semesters (MARTIN, WEYMOUTH)

Lec. M 1:05; Lab. MT or ThF 1:05-4:05

2. **Physiology of Muscle and Nerve.**—To be preceded by courses 1 and 9 by majors in the Department. An experimental course covering the ground represented in Howell's Text-book on the same subjects. (Two lectures and five laboratory hours per week.)

4 units, 1st semester (MARTIN, SLONAKER)

Lec. TTh 8; Lab. MT or ThF 1:05-3:35

3. **Physiology of Blood and Circulation, Respiration, Digestion, Elimination of Wastes, Metabolism, and Nutrition.**—Planned to follow course 2. An experimental course, covering the ground represented in Howell's Text-book. (Two lectures and five laboratory hours per week.)

4 units, 2d semester (MARTIN, SLONAKER)

Lec. TTh 8; Lab. MT or ThF 1:05-3:35

4. **Anatomy and Histology of the Sense Organs.**—Dissections, and study of prepared slides. Texts: Quain-Schäfer's Microscopic Anatomy, Quain's Sense Organs. One lecture and five laboratory hours per week. Prerequisites for courses 4 and 5 are courses 1 and 9, for majors in the Department.

3 units, 1st semester (STOLTENBERG)

Lec. W 8; Lab. MW 8-12, or MT 1:05-4:05

5. **The Nervous System.**—A study of the structure of the central nervous system of man by means of dissections and prepared slides, supplemented by dissections of central nervous system of other mammals. Texts required: Villiger's Brain and Spinal Cord; Herrick's Introduction to Neurology; supplementary texts: Barker's Nervous System, Edinger's Nervöse Centralorgane, Johnston's Nervous System of Vertebrates, Quain's Neurology, Van Gehuchten's Système Nerveux. (One lecture and five laboratory hours per week.)

3 units, 2d semester (STOLTENBERG)

Lec. W 8; Lab. MW 8-12, or MT 1:05-4:05

6. **Physiology of the Nervous System and Sense Organs.**—An experimental course in these subjects, requiring courses 4 and 5 as preliminary. (One lecture and five laboratory hours per week.)

3 units, 2d semester (WEYMOUTH)

Lec. Th 1:05; Lab. ThF 1:05-4:05

8. Special Courses in Physiology.—Advanced courses open only to those who have had courses 1, 2, 3, 4, 5, and 6. They are arranged for the advanced study of selected subjects in physiology, or as a drill in the methods of research. The work will be planned for the individual student, the time varying with the exigencies of the case.

2 to 5 units, both semesters (MARTIN) By arrangement

9. Histology.—The study of the structure of the cell and its modes of reproduction, the epithelial, muscular, nervous, and connective tissues, and the outline of their development in a comparative way occupy the first semester. During the second semester the structure of the blood and lymph, and the microscopic anatomy of the organs are dealt with. Text required: Quain-Schäfer's Microscopic Anatomy. Elementary histological technique is taught during the course. In either semester a limited number of students may register for an extra unit, which is devoted to more extended histological technique. Prerequisite for course 9, course 1, or its equivalent. (One lecture and five laboratory hours per week.)

3 units, both semesters (MCFARLAND) Lec. T 11; Lab. TTh 8-11

10. Histogenesis.—A course in advanced Histology for students who have completed courses 1 and 9, and in addition the first semester of Vertebrate Embryology (Zoology 11). It comprises the comparative study of the histogenesis of the fundamental vertebrate tissues and organs. (One lecture per week, minimum laboratory work six hours per week.)

3 units, 1st semester (MCFARLAND) Lab. MTW 1:05-4:05

11. Neurocytology.—A comparative study of the minute structure of the nerve cell and nerve fibre, the neurone theory, and the question of functional alterations of structure during normal activity and artificial stimulation. (One lecture and at least six laboratory hours per week.) Open to advanced students.

3 to 5 units, 2d semester, in alternate years (MCFARLAND)
[Not given in 1916-17.]

12. Cellular Biology.—A course in Cytology dealing with the structure and functions of the cell, with special reference to the reproductive processes in unicellular and multicellular organisms, and the theories connected therewith. Open to advanced students. (Two lectures per week, with demonstrations and laboratory work.)

3 to 5 units, 2d semester, in alternate years (MCFARLAND)
MTW 1:05-4:05

13. Special Courses in Histology.—Advanced courses in Histology, Cytology, Microscopic Anatomy, and Microscopic Technique will be arranged for individual students, in accordance with their special needs. Open only to those who have had courses 1, 4, and 9.

2 to 5 units, both semesters (McFarland) By arrangement

14. Journal Club.—Students in the advanced classes will be expected to meet once a week to discuss current literature in Physiology and Histology.

1 unit, both semesters (Department Faculty) T 4:05

15. Research in Physiology or Histology

(Martin, McFarland, Slonaker, Stoltenberg, Weymouth)

By arrangement

Candidates for the Bachelor's degree who select Physiology and Histology as a major will be expected to take courses 1, 2, 3, 4, 5, 6, 9, and 14, and at least five units to be made up from the other courses offered in the Departments of Physiology, Anatomy, or Bacteriology; and in addition courses 1 and *a* in Chemistry, one year in Physics (see course 7), and the first semester in Embryology (course 11 in Zoology). Candidates for the degree of M. D. will also include Organic Chemistry and courses in German or French sufficient to give a reading knowledge of the language.

Laboratory Unit of Credit.—In those courses in which definite laboratory time is not fixed, three hours of laboratory work per week through one semester are taken as the equivalent of one unit of credit.

The Teacher's Recommendation.—Students who wish the Department recommendation for High School teaching in Physiology are expected to complete courses 1, 2, 3, and 9.

Laboratory Fees.—$5 per semester for each laboratory course.

Graduate Courses

The graduate work of the Department is included in the courses 8, 10, 11, 12, 13, 14, and 15. Undergraduate students may elect such of these courses as they are prepared to take, but credit recorded in undergraduate standing will not count toward a higher degree. The details of the work of a graduate student will be planned for each individual, and will naturally depend on the aim sought by him and upon his previous training. Candidates for the higher degrees will be expected to include in their work attendance on the Journal Club and Seminary, the selection of certain of the courses given above, and the accomplishment of some research. When it is desired to select a minor subject, the choice of such minor will be guided by the needs of the candidate. The work leading to these degrees is of such a nature as to require a reading knowledge of German and French for its accomplishment.

Preparation for the Study of Medicine

Students intending to enter on the study of Medicine are advised to take Physiology and Histology as a major subject, with Chemistry, Physics, and Anatomy among the collateral subjects. Such a curriculum gives that foundation both in scientific knowledge and in skill in experimental Physiology, and in Histological and Anatomical technique, which will make it possible to accomplish the medical course of the best medical schools with the greatest advantage. The courses required for graduation in the Department of Physiology and Histology with the degree of A. B. include the premedical requirements and the work of the first year of the Medical Department of this University. For details of requirements for students intending to register in the Department of Medicine see the announcement of that Department.

PSYCHOLOGY

Frank Angell, Professor.
John Edgar Coover, Assistant Professor and Research Fellow in Psychic Phenomena.
Joseph Edgar De Camp, Instructor.
Gertrude May Trace, Assistant in Instruction.

1. **General Psychology.**—Lectures and exercises. Not open to first-year students except by permission. Titchener's Text-book of Psychology is used as a book of reference.
4 units, 1st semester (Angell) MTWF 11

2. **Laboratory Psychology.**—Students are recommended to take this course in connection with courses 1 and 2.
3 units, either or both semesters (De Camp) TTh 1:05

2a. **Laboratory Psychology.**—In connection with Psychology 1 or its equivalent.
3 units, both semesters (Trace, Angell) MWF 1:05

2b. **Laboratory Psychology.**
2 units, 2d semester (Trace, Angell) TTh 1:05

3. **Abnormal Psychology.**
2 units, 2d semester (De Camp) TTh 8

4. **Advanced Laboratory Work.**
3 units, both semesters (Angell) MWF 1:05

4a. **Space Perception.**—Usually presupposes or accompanies course 4.
2 units, 2d semester (Angell) TF 11

5. Statistical Methods.
2 units, 1st semester (COOVER) TTh 9

6. History of Psychical Research.
2 units, 2d semester (COOVER) TTh 10

7. Psychical Research Laboratory.
2 units, 2d semester (COOVER) TTh 1:05-4:05 by arrangement

8. Mind and Body.—Course 1 prerequisite.
3 units, 2d semester (COOVER) [Not given in 1916-17.]

9. Research Work.
(ANGELL, COOVER) By arrangement

10. Current Psychology Literature.
(ANGELL) By arrangement

ROMANIC LANGUAGES

OLIVER MARTIN JOHNSTON, Professor.

CLIFFORD GILMORE ALLEN, AURELIO MACEDONIO ESPINOSA, Associate Professors.

*ROBERT EDOUARD PELLISSIER, STANLEY ASTREDO SMITH, Assistant Professors.

LOUIS PETER DE VRIES, GABRIEL HENRY GROJEAN, Instructors.

EDMUND VERNON GAGE, EUGENE JEAN OBERLÉ, JOHN SELLARDS, ALYSSA DE BERNARDI, Assistants in Instruction.

The undergraduate courses in the Romanic Languages are planned so as to give students an intimate acquaintance with the modern forms of the languages spoken in the principal neo-latin countries. To this end systematic attention is paid to pronunciation, reading, syntax, and conversation. In the higher courses special emphasis is laid on the study of literature. In order to give students an opportunity to become familiar with the spoken idioms, some of the courses are conducted as far as possible in the language which forms the object of study.

The Department recognizes two classes of major students: (1) students who expect to teach French or Spanish and who wish to take up the study from the point of view of the specialist: (2) students who desire to group a course of study of a general nature around that of French or Spanish.

Either French or Spanish may be selected as a major subject. Majors in either of these subjects will be required to complete forty units in the Department exclusive of the elementary course in the major subject.

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* Deceased August 29, 1916.

In addition major students who intend to teach either French or Spanish will be expected to take at least the elementary course in one of the other Romanic languages. A reading knowledge of Latin and German is also highly desirable.

The Teacher's Recommendation.—The minimum requirement for the High School recommendation is as follows: In French—courses 2, 3, 6, 17, and six units selected from courses 7, 8, 9, 18, 19, 21; in Spanish—courses 10, 11, 12, 13, 14, 24, and 22 or 23. The Department will insist also on course 26. Recommendations will be given only on the vote of the Department, and will demand a degree of scholarship above the ordinary passing mark.

Courses for Undergraduates

1a. Elementary French.—Fraser and Squair, French Grammar, with written and oral exercises and systematic training in French pronunciation; Aldrich and Foster's French Reader.

3 units, both semesters (Johnston, de Vries, Grojean, Sellards) MWF 8, 10, 11

1b. Elementary French, Reading Course.—The course is intended for students who merely desire to obtain a reading knowledge of the language. Aldrich and Foster, Foundations of French; Aldrich and Foster's French Reader; Mérimée, Colomba.

3 units, both semesters (Grojean) [Not given in 1916-17.]

[Courses 1*a* and 1*b* are continuous courses, open to all, but students desiring to enter after the end of the second week will be admitted only upon special examination.]

2. French Composition and Conversation.—The course will be conducted as far as practicable like the corresponding course in English composition, a part of each hour being devoted to conversation. Open to students who have completed course 1*a*, or who have received credit for entrance subject 6*a*.

3 units, both semesters (de Vries, Grojean) MWF 8, 9

3. Modern French Reading.—Reading of selected texts in prose and verse. In addition, some 300 pages of easy prose will be assigned each semester for outside reading. Open to students who have completed course 1*a* or course 1*b*, or who have received credit for entrance subject 6*a*.

2 units, both semesters (de Vries, Sellards) TTh 9, 10

4. French Pronunciation.—Practice in French pronunciation with the phonograph, open to students registering for course 2. One class exercise and two practice hours each week for one semester.

1 unit, either semester (DE VRIES) M 1:05

[Courses 2, 3, and 4 constitute the second year's work in French, and should, if possible, be taken during the same year. Course 4 may not precede course 2.]

5. Reading and Writing of French.—Vreeland and Koren, French Syntax and Composition. An intermediate course in reading and composition intended primarily for students entering with entrance subjects *6b* or *6c*.

3 units, both semesters (GROJEAN) MWF 9

6. Advanced French Prose Composition.—Translation into French of selected English prose. Open to students who have completed course 2 or course 5.

2 units, both semesters (GROJEAN) TTh 8

7. French Literature in the Seventeenth Century.—Lectures, reports, discussions, outside reading. Conducted in English.

3 units, both semesters (SMITH) MWF 10

8. Lectures on Modern France.—The lectures will be in French. There will be outside reading and reports. Prerequisites: courses 2 and 3, or course 5, or their equivalent.

2 units, 1st semester (GROJEAN) TTh 10

9. Introduction to the History of French Civilization.—Lectures in French. Outside reading and reports. Prerequisites as above.

2 units, 2d semester (GROJEAN) TTh 10

10. Elementary Spanish.—The elements of grammar, composition, and conversation; reading, translation, and conversation based on Spanish texts. A continuous course open to all.

3 units, both semesters (ALLEN, GAGE, SELLARDS, OBERLÉ, DE BERNARDI) MWF 8, 9, 10, 11

11. Second-year Spanish Composition and Conversation.—Review of grammar, with composition and conversation. Conducted entirely in Spanish. Open to students who have completed course 10, or its equivalent.

3 units, both semesters (ESPINOSA, SMITH) MWF 8, 9

12. Modern Spanish Reading.—Reading of selected texts in prose and verse. Open to students who have completed course 10 or who have received credit for entrance subject *5a*.

2 units, both semesters (ALLEN, ESPINOSA, GAGE, DE BERNARDI) TTh 9, 10

13. Advanced Spanish Composition and Conversation.—(*a*) Reading of Spanish texts with exercises in composition and abundant oral drill. (*b*) Translation into Spanish of selected English prose. Open to students who have completed course 11 or its equivalent.
2 units, both semesters (ESPINOSA) TTh 9

14. Classical Spanish.—A study of the principal authors of the classical period. Representative texts will be read of Cervantes, Lope de Vega, Calderón, Alarcón, Tirso de Molina, as well as selections from Ford's A Spanish Anthology. Open to students who have completed courses 11 and 12 or their equivalent.
3 units, 1st semester (ALLEN) MWF 8

15. Elementary Italian.—Grandgent's Italian Grammar. A continuous course open to all.
3 units, both semesters (SMITH) MWF 11

15a. Elementary Portuguese.
3 units, both semesters (SMITH) MWF 9

16. Dante and the Divine Comedy.—Lectures, with assigned readings. Open to juniors and seniors in all departments.
2 units, 2d semester (JOHNSTON) [Not given in 1916-17.]
[Course 16 alternates with course 25.]

COURSES FOR UNDERGRADUATES AND GRADUATES

17. Outline Course in the History of French Literature.—A course based on the *Histoire Illustrée de la littérature française* by Abry, Audic, and Crouzet. The text will be studied outside of class and periodic tests will be given upon it. There will be occasional supplementary lectures. Most of the work done in class will consist of the reading and interpretation of representative works of some of the best authors of each period. Some outside reading will also be assigned. Prerequisites: courses 2 and 3, or course 5, or their equivalents.
3 units, both semesters (SMITH) [Not given in 1916-17.]

18. Realism in the Modern French Drama.—Lectures in English on the realistic movement in the French drama since 1850. Extensive reading outside of class and discussion of plays of representative modern authors. Prerequisite: course 17 or 18 or an equivalent.
3 units, 1st semester (DE VRIES) MWF 8

19. The French Novel.—Lectures in English. Emphasis will be placed on the study of the realistic-naturalistic movement of the 19th century. Extensive reading outside of class and discussion of representative works. Prerequisites: courses 2 and 3 or 5.
3 units, 2d semester (DE VRIES) MWF 8

20. Literary Criticism.—Lectures in English on the history of literary criticism in France from the Renaissance to modern times. Emphasis is laid on the 19th century.
2 units, 2d semester (DE VRIES) [Not given in 1916-17.]

21. The Romantic Movement in France, Italy, and Spain.—(*a*) First semester: Neo-classicism in the Romance countries. Rousseau, Bernardin de St. Pierre, Chateaubriand, the Italian Romanticists. (*b*) Second semester: The French and the Spanish Romanticists. The course is intended for seniors and graduates having a good knowledge of one Romanic language. The lectures will be in French. Each student will be expected to read widely in either the French, the Spanish, or the Italian field.
2 units, both semesters (GROJEAN) [Not given in 1916-17.]

22. Modern Spanish Novel.—A study of the modern Spanish novel and its relation to the development of the novel in France and other European countries. Lectures and collateral readings. Conducted in Spanish.
2 units, 1st semester (ALLEN) TTh 8

23. Modern Spanish Drama.—(*a*) A rapid survey on the development of the Spanish drama in the nineteenth century, with a study of the more important works of Rivas, Gutiérrez, Zorrilla, Bretón de los Herreros, Ayala, Echegaray. (*b*) A study of the significant works of the contemporary dramatists, especially Benavente, the Quintero brothers, Dicenta, Marquina and Martínez Sierra. Lectures and collateral readings. Conducted in Spanish.
3 units, 1st semester (ESPINOSA) [Not given in 1916-17.]

24. Outline Course in the History of Spanish Literature.—Lectures with reading of important works and reports by the members of the class. Open to students who have completed course 14 or its equivalent. Conducted in Spanish.
3 units, 2d semester (ALLEN) MWF 8

25. Advanced Italian.—Dante, La Divina Commedia. Translation course open to students who have completed course 15.
3 units, both semesters (JOHNSTON) MF 1:05

26. Teachers' Course in French.—Lectures on methods of teaching French, study of the available text-books, review of French grammar. Open only to advanced students.
2 units, 1st semester (JOHNSTON) [Not given in 1916-17.]

COURSES FOR GRADUATES

27. Origins of Spanish Drama.—A history of the drama from the earliest times to its full development with Lope de Vega. Lectures and collateral reading. Conducted in Spanish.

2 units, 2d semester (ALLEN) TTh 8

28. Introduction to the Study of Old Spanish.—Reading and interpretation of old Spanish texts. Lectures on old Spanish Phonology and Morphology, with linguistic exercises based on El Cantar de mio Cid. Ford, Old Spanish Readings, Biblioteca de Autores Españoles, vol. LVII.

3 units, 1st semester (ESPINOSA) MWF 10

29. Spanish Historical Grammar.—Lectures and study of Old Spanish texts. Hannsen, Gramática Histórica Castellana, Halle, 1913.

2 units, 1st semester (ESPINOSA) [Not given in 1916-17.]

30. Old Spanish Ballads.—History of Spanish epic poetry from the cantares de gesta to the romances. Lectures, readings, and investigations on special topics.

3 units, 2d semester (ESPINOSA) [Not given in 1916-17.]

31. Spanish Seminary, Lope de Vega.—Topics assigned to each student.

2 units, 1st semester (ALLEN) [Not given in 1916-17.]

32. Romance Versification.—The fundamental principles of Romance verse structure, with particular attention to French and Spanish. Lectures and practical exercises.

3 units, 2d semester (ESPINOSA) MWF 10

33. Introduction to the Study of Old French.—Reading of selected passages from Bartsch-Wiese, Crestomathie de l'Ancien Français (Leipzig, Vogel, 1908), with a study of Old French Phonology and Morphology.

2 units, 2d semester (JOHNSTON) TTh 1:05

34. French Historical Grammar.—Lectures on Old French Phonology and Morphology.

2 units, 2d semester (JOHNSTON) S 8-10

35. Old French Literature.—Lectures, with assigned readings.

2 units, both semesters (JOHNSTON) MF 2:05

36. Introduction to the Study of Old Provençal.—Readings of selected passages from Appel's Provenzalische Chrestomathie, with a study of Old Provençal Phonology and Morphology.

3 units, 2d semester (JOHNSTON) [Not given in 1916-17.]

37. French Seminary.—In 1916-17 the Seminary will be devoted to the study of the Romans d'Aventure. Topics assigned to each student.
2 units, both semesters (JOHNSTON) W 2:05-4:05

38. Journal Club.—The instructors in the department and the advanced students meet regularly on alternate Fridays for the discussion of the periodicals and new books. Th 2-3

ZOOLOGY

CHARLES HENRY GILBERT, HAROLD HEATH, GEORGE CLINTON PRICE, Professors.

JOHN OTTERBEIN SNYDER, Associate Professor.

EDWIN CHAPIN STARKS, WALTER KENRICK FISHER, Assistant Professors.

[Courses 1, 2, 3, and 4 may be undertaken without previous preparation in Zoology.]

1. Elementary Zoology.—A laboratory course involving the study of representatives of the principal groups of animals, accompanied by lectures on their structure and classification, and on the general laws of biology which they illustrate.
3 units, both semesters (PRICE, STARKS)
Lec. M 1:05; Lab. MT 1:05-4:05

2. Animal Forms.—An introduction to the facts and principles of animal biology; structure, function, and interrelations of animal forms; the simpler and best established generalizations in zoological theory.
3 units, 2d semester (FISHER)
Lec. by arrangement; Lab. ThF 1:05-4:05

3. Animal Life.—A consideration of the general principles of biology based on a study of the behavior, environment, structure, and relationships of the simpler fresh-water organisms. This course will be especially useful to students who intend to teach where marine material is not available.
2 units, 1st semester (FISHER) Lab. MT 1:05-4:05

4. Limnology.—A course in general limnology, or a special study of a restricted group of fresh-water organisms. Must be preceded by course 1, or 2, or 3.
1 to 3 units, either semester (FISHER) By arrangement

5. The Vertebrates.—A general course in the classification of vertebrate animals, with studies in their habits and the geographical distribution of species. The course will include field excursions and a study of the methods of collecting and preserving specimens.

2 units, both semesters (SNYDER) Lec. Th 2:05; Lab. ThF 1:05-4:05

6. The Invertebrates.—This course, following course 1 or 2, is designed to give the student a broader knowledge of the morphology and relationships of the more important invertebrate groups.

3 units, both semesters (HEATH)
Lec. by arrangement; Lab. MT 1:05-4:05

7. Invertebrate Embryology.—A study of segmentation, the formation of the germ layers, and certain phases of the later development, including the significance of larval forms and the relationships of the principal phyla. Must be preceded by courses 1 or 2, and 6.

2 units, both semesters (beginning 2d semester) (HEATH)
By arrangement

8. Advanced Work on Invertebrates.—The original investigation of problems connected with the anatomy and embryology of invertebrates.

3 to 5 units, both semesters (HEATH) By arrangement

9. Microscopical Anatomy.—A study of the fundamental animal tissues, with drill in microscopical technique.

2 units, 1st semester (HEATH) By arrangement

10. Special Systematic Work on Invertebrates.—Original investigation of problems connected with the classification of invertebrates.

2 or 3 units, both semesters (FISHER) By arrangement

11. Comparative Anatomy of the Vertebrates.—A detailed examination of vertebrate morphology, including dissection of representatives of the several classes of vertebrates, with comparative studies in vertebrate osteology, the nervous and circulatory systems.

3 units, both semesters (SNYDER) Lab. MTW 1:30-4:30

12. Vertebrate Embryology.—First semester: development of the chick through the first three days of incubation. In the first semester students may register for an additional unit, to be devoted to embryological technique. Second semester: later stages in the development of the mammal.

2 units, both semesters (PRICE, FISHER)
Lec. Th 1:05; Lab. ThF 1:05-4:05

13. Primitive Chordates.—Amphioxus, the tunicates, and the lampreys.

3 units, 1st semester (GILBERT) Morning hours, by arrangement

14. Fishes.—An examination of the larger groups of fishes and practical work in the discrimination of species.

3 units, 2d semester (GILBERT) Morning hours, by arrangement

15. Advanced Ichthyology. -Special problems in the morphology and classification of fishes will be set for advanced students prepared for such work.

2 to 5 units, both semesters (GILBERT) By arrangement

16. Comparative Osteology of the Lower Vertebrates.—A course for advanced students in the osteology and relationships of the lower vertebrates, to be arranged either as a general course, or as an intensive study of a few related forms.

2 or 3 units, both semesters (STARKS) By arrangement

17. Journal Club.—Open to seniors and graduate students.

2 units, both semesters (GILBERT) By arrangement

Major students must before graduation complete courses 1, 5, 6, 9, 11, 13, 14, 17, the first semester of courses 6 and 12, one advanced course in Zoology, and course 1 in Botany.

Work for graduate and special students will be laid out in accordance with their individual needs and preferences.

Students who look forward to the study of medicine may take Zoology for their major subject and receive the A. B. degree at the close of a four years' course which shall also contain the first year in medicine. The following courses in Zoology will be required of such students: Zoology 1, or 2 and 3, 6 units; the Invertebrates, 6 units; Comparative Anatomy, 6 units; Embryology, 4 units; Journal Club, 4 units.

THE TEACHER'S RECOMMENDATION.—The Department recommendation for High School teaching in Zoology requires the completion of the following subjects: Zoology 1, or 2 and 3, 6 units; the Invertebrates, 6 units; the Vertebrates, 4 units; Comparative Anatomy of the Vertebrates, 6 units; Embryology, 4 units.

THE ZOOLOGICAL COLLECTIONS

The ZOOLOGICAL MUSEUM contains a very full representation of the fishes of North America, and includes among others a valuable series of the deep-water fishes of the Pacific, and large collections from the West Indies, the Hawaiian Islands, Bering Sea, Japan, the coasts of Mexico and Central America, and the Galapagos Islands. The museum contains also a large representation of the reptiles, batrachians, birds, and mammals of California and adjoining States. The collection of marine invertebrates is rich in Pacific echinoderms and crustacea, and contains a good working nucleus in the other principal groups. The series of deep-sea forms is especially valuable.

LABORATORY FEES.—All laboratory courses, $3 each per semester.

LECTURES, RECITALS, LITERARY CONTESTS, HONORS, AND CLUBS

UNIVERSITY ASSEMBLIES

UNIVERSITY Assemblies are held on alternate Thursdays at eleven o'clock. All university classes are suspended during the Assembly hour.

The following is the programme of meetings for 1916-17 (to March 1st):

August 31.—Annual Reception to New Students: Addresses, President WILBUR; the Chaplain, Mr. GARDNER; the Dean of Women, Miss BRADFORD; the Student Adviser, Mr. STANIFORD.

September 14.—Conditions in Belgium, France, and England: Dean DAVID P. BARROWS, of the University of California.

September 28.—A Survey of Belgium Relief Work: Professor FRANK ANGELL.

October 12.—Some Pan-American Illusions: The Hon. FRANCIS BUTLER LOOMIS, Ex-Assistant Secretary of State.

October 26.—Ways to Pass the Walls of the World: Professor CASSIUS JACKSON KEYSER, of Columbia University.

November 2.—(1) The Work of the American Red Cross Unit in Servia: Dr. SHADWORTH O. BEASLEY, of the Stanford Medical School; (2) The American Ambulance Service in France: Miss ETHEL MARY CROCKER, of San Francisco.

November 9.—Conditions of Success: Mr. WILLIAM SPROULE, President of the Southern Pacific Railway Company.

November 23.—America's National Mission: The Rt. Rev. CHARLES HENRY BRENT, D. D., Bishop of the Philippines.

December 7.—The Quest of Diogenes: President AURELIA HENRY REINHARDT, of Mills College.

January 11.—Vocational Guidance: President WILBUR; Professor JOSEPH GRANT BROWN, Chairman of the Faculty Committee on Vocational Guidance; Mrs. ELIZABETH B. SNELL, Appointment Secretary; Mr. JOHN E. McDOWELL, Alumni Secretary.

January 25.—Organ Recital in Memorial Church: Mr. EDWIN H. LEMARE, of Boston, Mass.

February 8.—Leadership: Mr. CHESTER HARVEY ROWELL, Editor of the Fresno Republican.

UNIVERSITY ADDRESSES, ETC.

The Faculty Committee on Public Exercises presents a series of addresses, recitals, concerts, or other form of entertainment, usually on Tuesday evenings. The following is the programme of meetings for 1916-17 (to March 1st):

September 6.—The Spiritual Ministry of America: The Rev. WILLIAM L. SULLIVAN, Minister of All Souls Church, New York City.

September 12, 14, 20.—The Religious Significance of the Personality of Jesus: Three lectures by the Rev. CHARLES W. GILKEY, D. D., Minister of Hyde Park Baptist Church, Chicago.

September 19.—Song Recital: Mrs. LEONARD W. ELY.

September 22.—Hunting Hieroglyphics in Central American Jungles: Dr. SYLVANUS G. MORLEY, Research Associate in American Archaeology in the Carnegie Institution of Washington.

September 26.—Labor and Politics: Professor ALVIN SAUNDERS JOHNSON.

October 3.—Song Recital: Miss AMY HOLMAN, of Oakland.

October 10.—Mere Poetry: Professor LEE EMERSON BASSETT.

October 17.—The Far Horizon of Science: Dr. PERCIVAL LOWELL, Director of the Flagstaff (Ariz.) Observatory.

October 24.—Chamber Concert, by the Savannah String Quartet.

October 31.—The Democratic and the Aristocratic Ideals in Education: Professor MARY WHITON CALKINS, of Wellesley College.

November 7.—The Case of Euripides: Professor PAUL SHOREY, of the University of Chicago.

November 14.—Liquid Air Demonstration: Professor EDWARD CURTIS FRANKLIN.

November 21.—Concert by the Palo Alto Symphony Orchestra, in Assembly Hall.

December 5.—Organ Recital in Memorial Church: Mr. LOUIS H. EATON, assisted by the Savannah Ensemble Club.

December 12.—Present Activities toward Permanent Peace: Dr. DAVID STARR JORDAN.

January 22.—Personal Experiences in Louvain during the German Invasion: Professor A. VAN HECHE, of the University of Louvain.

January 23.—The Battle of the Marne: Mr. SIDNEY CORYN, of the San Francisco *Argonaut*.

January 29.—New Shakespeare Discoveries: Dr. CHARLES WILLIAM WALLACE, formerly Professor of English in the University of Nebraska.

January 30.—Chamber Concert, by the STANFORD MUSIC CLUB.

February 6.—The Slavic Peoples and the War: Professor GEORGE RAFAEL NOYES, of the University of California.

February 13.—Recital, by the Schubert Club and the Stanford Mandolin Club.

February 20.—The Condition and Development of the Port of San Francisco (illustrated): The Rev. CHARLES P. DEEMS, Superintendent of the Seamen's Institute, San Francisco.

February 27.—The Influence of Holland on America: DR. LEONARD C. VAN NOPPEN, Queen Wilhelmina Lecturer, Columbia University.

CLUBS AND ASSOCIATIONS

COSMOPOLITAN CLUB

September 11, 1916.—The Founding of the Cosmopolitan Club of Stanford: Dr. YAMATO ICHIHASHI.

September 25.—Suspending Judgment the Duty of Cosmopolitans: Professor PAYSON J. TREAT.

October 9.—The American Neutral Conference Committee: Professor EDWARD KREHBIEL.

October 23.—The Relation of Cosmopolitans to the Movement for Universal Peace: Mr. EDWARD BERWICK, of Monterey.

November 20.—Illustrated Lecture on Alaska: Mr. GEORGE A. CLARK.

January 15, 1917.—What South America Thinks of Us: Professor PERCY ALVIN MARTIN.

January 29.—The Present European War: Dr. DAVID STARR JORDAN.

February 12.—The Relations Between China and Japan: Dr. YAMATO ICHIHASHI.

SOCIOLOGICAL CLUB

October 4.—Labor Organizations and Government: Mr. JAMES A. EMERY, of the National Manufacturers' Association.

November 1.—The Productivity Theory and Social Welfare: Professor STEPHEN IVAN MILLER.

January 24.—Teaching the Farmer How Better to Market His Crops: Mr. HARRIS WEINSTOCK, State Commissioner of Markets.

February 14.—Social Conditions in Russia: Mr. HENRY LANZ.

SIGMA XI

January 24.—The Atom: Professor ROBERT ANDREWS MILLIKAN, of the University of Chicago.

CLASSICAL CLUB

November 15, December 4.—Euripides' "Iphigenia among the Taurians," and "The Trojan Women": Readings by Miss DOROTHEA SPINNEY.

EDUCATIONAL SOCIETY

October 11.—Some Recent Developments in the High Schools of California: Mr. WILL C. WOOD, State Commissioner of Secondary Schools.

October 25.—The Problem of Vocational Training: Mr. GEORGE A. CLARK.

POPULAR MEDICAL LECTURES

January 12, 1917.—What Everyone Should Know About Cancer: Dr. HARRY M. SHERMAN, representing the American Society for the Control of Cancer.

January 26.—Modern Efforts to Secure Painless Childbirth: Dr. FRANK W. LYNCH, Professor of Obstetrics and Gynecology, University of California.

February 9.—Poliomyelitis: Dr. WILLIAM C. HASSLER, Health Officer of San Francisco.

February 23.—The Importance of Proper Habits of Carriage as a Basis of Health (illustrated): Dr. HARRY L. LANGNECKER.

March 9.—The Problem of Race and Race Prejudice: Professor ARTHUR W. MEYER, of the Department of Anatomy.

March 23.—Prevention of Blindness (illustrated): Dr. HANS BARKAN.

MUSICAL AND DRAMATIC RECITALS

October 5.—Production of "The Flax," by the Wood Bees.

October 6.—What Happened in Fairyland: Under direction of Madame H. FOREMAN EMERICK, for the benefit of the orphaned war zone children.

October 13.—Production of "Seven Keys to Baldpate," by Sword and Sandals.

November 3.—Production of "The Show Shop," by the Sophomore Class.

November 16.—Presentation of Anatole France's "The Man Who Married a Dumb Wife," by the Social Dramatic Club.

November 27.—Production of Leo Ditrichstein's "The Concert," for the benefit of the Auxiliaries to the Stanford Clinic.

PENINSULA MUSICAL ASSOCIATION

November 28.—Song Recital: Mme. ERNESTINE SCHUMANN-HEINK.

December 7.—Piano Recital: Mr. PERCY GRAINGER.

February 23, 1917.—Song Recital: M. LOUIS GRAVEURE.

March 22.—Concert: The San Francisco Symphony Orchestra, Mr. ALFRED HERTZ, Conductor.

PHI BETA KAPPA OPEN MEETING

May 20, 1916.—The Address, The Oxford of Forty Years Ago: Professor HENRY MORSE STEPHENS, of the University of California. The Poem: Professor WILLIAM HERBERT CARRUTH.

COMMENCEMENT

May 22, 1916.—Commencement Address, Twenty-five Years of Stanford: Chancellor DAVID STARR JORDAN. Address to the Recipients of Degrees: President RAY LYMAN WILBUR.

THE RAYMOND FRED WEST MEMORIAL LECTURES ON IMMORTALITY, HUMAN CONDUCT, AND HUMAN DESTINY

"In memory of our beloved son, Raymond Fred West, a student in Leland Stanford Junior University, who was drowned in Eel River, California, on January 16, 1906, before the completion of his college course, we wish to present to the trustees and authorities of the Leland Stanford Junior University, at Palo Alto, California, the honored Alma Mater of our son, the sum of ten thousand dollars, to be held as a fund in perpetual trust, for the establishment of a lectureship on a plan similar to the Dudleian Lectures and the Ingersoll Lectures at Harvard University. . . .

"It is our wish that such lectures shall not form part of the usual college or university course, nor shall they be delivered by any professor or instructor in active service in the institution. Such lecturer may be a clergyman or a layman, a member of any ecclesiastical organization, or of none, but he should be a man of the highest personal character and of superior intellectual endowment. He shall be chosen by the Faculty and the Board of Trustees of said University in such manner as the said Board of Trustees may determine, but the appointment in any case shall be made at least six months before the delivery of said lecture. . . .

"The course of lectures shall be known as the 'Raymond Fred West Memorial Lectures on Immortality, Human Conduct, and Human Destiny.'"

In accepting this gift from the donors, Mr. and Mrs. FRED WEST, of Seattle, Washington, and establishing the lectureship as provided in the terms of the gift, the University has adopted the following plan and regulations:

That these lectures be delivered in alternate years, the first in the year 1911; that the lecturer give at least three lectures; that these lectures be published in book form within not less than two years; that the lecturer have the option of publishing them himself, in which case the University will purchase a hundred copies, or of having the University publish them, in which case it will retain the copyright. In any case, the manuscript of the lecturer must be filed in the University archives;

That the honorarium given be decided in each case by the Board of Trustees, and that unless otherwise ordered the entire earnings of the West fund for the two years be devoted to honorariums and to the purpose of publication;

That the West Lecturer be each time nominated by the President, with the approval of the Advisory Board, and the consent and ratification of the Board of Trustees, as is the case with ordinary appointments.

The Bonnheim Ethical Dissertations and Discussion

The general subject for 1916-17 was "Ethics of the Indian Policy of the United States Government." The essays were received January 12, and the discussion took place February 14. The successful essayists were Robert Cedric Binkley, '20, Edward Goldberg, '17, John Connell Holland, '17, and John Evans Kimber, '17. The Bonnheim Discussion was won by Robert Cedric Binkley.

The judges of the dissertations were Professors Foster, Willis, and Vernier; of the discussion, Professors Cathcart and Robinson and Dr. Elliott.

Intercollegiate Debates

STANFORD-CALIFORNIA

An Intercollegiate Debate, under the auspices of the Associated Students of the University of California and of the Leland Stanford Junior University, is held in November of each year. In 1916-17 the debate was held November 24, in the Knights of Columbus Hall, in San Francisco.

The question for discussion was, "Resolved, That the United States should adopt the Swiss system of compulsory military training." The contestants were Harold Carl Blote, '18, Daniel Webster Evans, '20, and Goodwin Jess Knight, '19, of Stanford; Harold A. Hyde, '17, Martin Rosenblatt, '18, and Ray Vandervoort, '18, of the University of California.

Under a new agreement entered into between the students of Stanford and the University of California no judges were appointed and no formal decision followed the debate.

CARNOT

The CARNOT MEDAL, presented by the Baron de Coubertin, for the purpose of encouraging the study and discussion, in California, of French history and politics, is awarded annually to the student who, in the opinion of the judges, proves himself the best debater in a contest held for that purpose between Stanford University and the University of California.

Under the rules of the contest the general subject for discussion in 1916-17, "France's Reconstruction Policy after the Present War," was made known in December, 1916. The contest occurs April 13, and the particular phase of the question to be discussed will be made known to the contestants two hours before the time set for the debate.

STANFORD-WASHINGTON-OREGON

Debates with the Universities of Washington and Oregon are held under the auspices of the Pacific Coast Debating League, composed of Stanford University, the University of Oregon, and the University of Washington. Each institution is represented by two teams of two men each. The teams debate the affirmative and negative of the same question, which is chosen by the intercollegiate debating committees of the three institutions. The affirmative side of the question debates at home, while the negative side contests at one of the other universities.

The question for 1916-17 is: "Resolved, That the method of settling industrial disputes by compulsory investigation with compulsory acceptance of award. should be applied to all industrial disputes involving one hundred or more persons."

STANFORD-SOUTHERN CALIFORNIA

Under the auspices of the Associated Students of the University of Southern California and of the Leland Stanford Junior University a debate is held in November on some question determined by mutual agreement.

In 1916-17 the question was, "Resolved, That the United States should adopt a system of compulsory military service similar to that which obtains in Switzerland." The debate was held at Stanford, November 22. The affirmative was upheld by VOLTAIRE DUBOCK PERKINS, '17, WALTER THOMAS WATSON, '17, and ALVIN WILLIAM WENDT, '18, of the University of Southern California, and the negative by WALTER IRVING AMES, '18, FRED SEYMOUR FIELD, '18, and MARGARET COCHRAN SHEDD, '20, of Stanford. The judges were Professor WILLIAM A. MORRIS, of the University of California, Judge JOHN E. RICHARDS, of San Jose, and Mr. SAMUEL TOMPKINS, of San Jose. The debate was won by Stanford.

The Edward Berwick Junior Peace Prize

Under the auspices of the California Branch of the American Peace Society, an annual prize of fifty dollars, called the Edward Berwick Junior Peace Prize, is offered for competition by undergraduate students of Stanford University. The award is made to that speaker who, in a public contest, delivers the address which in the opinion of the judges is most effective in promoting the cause of international peace. A student who has once won the peace prize is not eligible to participate again in the contest. In 1916-17 the contest was held October 18. The contestants were Walter Irving Ames, '18, John Robert Brokenshire, '19, Thomas Hibben Claussen, '17, Clyde Julian Crobaugh, '19, Mervyn Crobaugh, '18, John Connell Holland, '17, Wayne Leslie Miller, '17, Joseph Soll Turley, '17, Ernest Elias Williams, '17. The prize was awarded to John Connell Holland, '17.

The date of the 1917-18 contest will be October 31.

Intercollegiate Prohibition Oratorical Contest

Under the auspices of the Intercollegiate Prohibition Association, the sum of one hundred dollars is offered annually for the best orations on some phase of the subject of Prohibition. This sum is divided into prizes of fifty, thirty, and twenty dollars each for the three best orations submitted.

Each competitor must deposit the manuscript of his oration with the Registrar on or before a fixed date in March. The manuscript must not be signed, but should bear some mark of identification and be accompanied by a sealed envelope containing the name of the author. A limit of fifteen hundred words is prescribed.

The orations are first graded by judges on thought and composition. Later a public contest is held at which time the contestants present their orations orally and are judged on delivery. The combined markings of the judges of the manuscripts and the spoken orations shall determine the successful contestants. The winner of the first prize is qualified to enter the State Intercollegiate Prohibition Contest to compete for a prize of fifty dollars. This latter contest is held some time in April. A National Contest is held every two years to which winners of State prizes are eligible. Prizes of fifty and one hundred dollars are offered in this contest.

The manuscripts of the 1916-17 contest are due at the Registrar's office on or before March 1st. The public contest will be held March 8th.

PHILOLOGICAL ASSOCIATION

Professor CLIFFORD GILMORE ALLEN, President.
Instructor ARTHUR GARFIELD KENNEDY, Secretary.

The UNIVERSITY PHILOLOGICAL ASSOCIATION was organized September 17, 1892, for the purpose of reading and discussing results of scientific investigations in language and literature. The membership consists of the instructors and advanced students in the different language departments in the University. The regular time of meeting is the first Thursday of each academic month, excepting September, January, and May, at 3:15 p.m.

The following is the programme of meetings for 1916-17:

October 5.—(1) The Purport of Shakespeare's Contribution to I Henry VI: Associate Professor HENRY DAVID GRAY; (2) Early French Examples of the Irrational Negative in Concessive Sentences: Professor OLIVER MARTIN JOHNSTON.

November 9.—(1) The History of the Writing of Goethe's Tasso: Associate Professor WILLIAM ALPHA COOPER; (2) The Birth-Date of Ben Jonson: Associate Professor WILLIAM DINSMORE BRIGGS.

December 7.—(1) An Interpretation of the Minoan Seal of the Priestess of Gea: Professor GEORGE HEMPL; (2) Liturgical Sources of the Marriage Service in Chaucer's Merchant's Tale: Professor JOHN S. P. TATLOCK.

February 1.—(1) The Nature of Wit: Assistant Professor SAMUEL SWAYZE SEWARD; (2) Martinez Sierra, a New Interpreter of Spanish Literary Ideals: Assistant Professor AURELIO M. ESPINOSA.

SCIENCE ASSOCIATION

Associate Professor SIDNEY DEAN TOWNLEY, President.
Assistant Professor FRANK WALTER WEYMOUTH, Secretary.

The SCIENCE ASSOCIATION was organized January 17, 1894. Original investigations and papers of general interest on scientific topics are presented from time to time.

The following is the programme of meetings for 1916-17:

September 27.—Modern Natural History Museums and Their Relation to Public Education: Dr. BARTON W. EVERMANN, Director of Museum, California Academy of Sciences.

October 25.—Some Physical and Chemical Changes in Inanition: Professors ARTHUR WILLIAM MEYER and ROBERT ECKLES SWAIN.

December 6.—Muscular Strength and Muscular Symmetry: Professor ERNEST GALE MARTIN.

THE FORUM

Executive Committee: Professor WILLIAM FREDERICK DURAND, Chairman; Professor WILLIAM DINSMORE BRIGGS, Secretary-Treasurer; Professor BENJAMIN OLIVER FOSTER.

THE FORUM, organized in 1909, is a Faculty Club for the unofficial discussion of academic questions. The following is the programme of meetings for 1916-17:

September 15.—The Proposed Changes in the Carnegie Pension System: Professor RUFUS LOT GREEN.

October 27.—Department Reports on the Four Quarter Plan: Professor SIDNEY DEAN TOWNLEY.

LELAND STANFORD JUNIOR MUSEUM

HARRY C. PETERSON, Curator.

CLIFTON C. COTTRELL, Assistant Curator.

In 1880, Leland Stanford, Junior, then eleven years of age, accompanied his parents on a trip through Europe, and collected numerous mementoes of the places visited. In 1883, on a second visit he began to pursue this object more ambitiously, and finally with the idea of establishing a museum. The Leland Stanford Junior Museum was designed by Mrs. Stanford as a memorial to perpetuate this idea, and the various collections are mainly her gift to the Museum.

The collection made by Leland Stanford, Junior, between 1880 and 1884, has been placed in two rooms (A and B), and in room A his own arrangement is reproduced in detail. In the room adjoining (B) are found mementoes of his early life. These two rooms contain especially Egyptian bronzes, Tanagra figurines, Greek and Roman glass, armor, mosaics, Sèvres and Dresden ware, and the like.

The Memorial Room (O) was designed to contain personal mementoes of Senator and Mrs. Stanford. The collection includes ancestral portraits of the Stanford and Lathrop families; two cases devoted to the Grant family collection; racing trophies; Muybridge's first photographs of "Animals in Motion," and subsequent works; the "Last Spike," and other historic relics of the Central Pacific Railroad; a large assortment of Point, Alençon, Chantilly, Duchesse, Honiton, Valenciennes, and other laces; India shawls, fans, Worth dresses, antique jewelry, and European souvenirs.

The vestibule and upper corridor are devoted principally to copies of the old masters.

The Di Cesnola Collection (rooms C and E) contains five thousand pieces of Greek and Roman pottery and glass from the Island of Cyprus.

Room F contains the famous historical relic, "The Governor Stanford," the first locomotive used on the Central Pacific Railroad, in 1864.

The American collection (I) is made up of mound relics, Indian baskets, Acoma ware, utensils, Alaskan canoes, totem poles, etc. In this room is also a display of material of the stone age purchased by Mrs. Stanford in Denmark. The center case in this room contains practically all the implements extant of the old Mission Dolores, presented by Don Pablo Vasquez, whose father was the last major-domo of the Mission. Included in the Mission collection are some extremely rare relics of Father Junipero Serra and the Carmel and Santa Barbara Missions.

Room J contains the Ikeda Chinese and Japanese collection, a choice collection of rare art material from the Orient. It was purchased in 1904 by Mrs. Stanford, and was placed on exhibition again in 1916.

In the Chinese and Japanese room (K) there is a collection of bronzes, arms, china, lacquer, cabinets, musical instruments, rich embroideries, and specimens of wood-carving, including the Imperial bedroom set, a marvel in wood-carving and inlaid work. This room contains the famous de Long Collection of Japanese rarities.

Room L. The Japanese collection, purchased by Mrs. Stanford in 1902, consists of cloisonne, Satsuma, porcelain, embroideries, Buddhistic images, and ivory carvings. The large bronze Koro, over 150 years old, is especially noteworthy. The Corean collection, the gift of Mr. Timothy Hopkins, contains costumes, household goods, cabinets, screens, etc.

The Fine Arts Collections (rooms P, Q, R, U, and V) include pictures by Messonier, Bouvier, Bonnat, Richter, Carolus-Duran, Van Wyck, Bierstadt, Ch. Landelle, Courtois, Piot, Munier, Brozik, Ricci, Humphrey Moore, Porteilje, Bradford, E. Paoletti, Mazzoni, Keith, Hill, Charles Nahl, C. T. Wilson, and many others.

A recent collection of eighty-five oil paintings, presented by Mr. Thomas Welton Stanford of Melbourne, Australia, includes canvases and panels from Minderhout Hobbema, James Giles, R. S. A., John Frederick Herring, Lienur, Van der Houten, Francis Snyders, W. J. Laidley, David Bates, John Yarley, Juliun M. Price, J. W. Ready, William Melby, James E. Meadows, Elijah Walton, F. G. S., W. Henry, W. Koek-Koek, E. Wake Cook, T. R. Miles, Sr., John Glover, Herr Schnars-Alquist, Louis Buvelot, William Hart, William Shiels, R. S. A., S. Bird, Patrick Nasmyth, Emil Bayard, Gerard Lairesse, C. Wimmer, Salvator Rosa, G. Koken, John Weenix, Bachman, Kobell, Jr., Charles Stuart, Heinrich Rasch, Melchoir Hondecooter, Marie Angelica Kaufman, Ten Kate, George Earl, Guardabassi, and E. G. Lewis. This collection is in Room U. A collection previously presented by Mr. Stanford includes a group of sixty oil paintings of Australian scenes, the work of I. W. Curtis, of Australia. Many of these are now hung in Room Q. The entire Thomas Welton Stanford collection of paintings will be transferred to the new Art Gallery in the second quadrangle upon its completion in 1917.

Room V contains the Anna Lathrop Hewes collection of paintings, statuary, mosaic, etc. Ceramics collected by Mrs. Stanford include Sèvres, Dresden, Royal Berlin, Persian, Pompador crystal, Bohemian and numerous other wares.

In Room U has been installed the collection of Venetian glassware, mirrors and mosaic art pieces, presented by Messrs. Salviati & Camerino, of Venice, Italy. This is the largest collection of Venetian glassware in America and comprises almost every conceivable pattern.

The mosaic exhibit, which was made with the personal co-operation of Mr. Zampatto, shows the structural evolution of mosaic from the fusing of the glass to various finished pieces.

Through the courtesy of Wells Fargo & Co., all gifts intended for the Museum will be transported free of charge over their lines, in shipments of fifty pounds or less, from railroad points in California, Oregon, and Nevada, if addressed to The Curator, Leland Stanford Junior Museum, Stanford University, California.

Museum hours: 10:00 a.m. to 5:00 p.m.

DEGREES CONFERRED

*September 10, 1915; †January 14, 1916; May 22, 1916.

BACHELOR OF ARTS

GREEK

Thomas Francis Bayard Angell
Helen Marie Graham

LATIN

Minerva Maconachie Anderson
Melinda Enke

GERMANIC LANGUAGES

Barbara Alderton
Josepha Helen Beamer
†Hazel Margreta Fisher
†Margaret Irving Forbes
*Elsa Hempl
Katharine Hutchinson
Lila Pierce Kellogg
Genevieve Morse
Harold Albert Noble
†Juliet Rich Pierce
Mabel Louise Schellbach
Herbert Sierk
Rowena Ellsworth Taylor
Edwin Adolf Zabel

ROMANIC LANGUAGES

Ruth Alice Irene Allum
Anna Laura Benton
†Alice de Bernardi
Amy Lenora Farrell
†Margaret Elva Hazlett
Marguerite Graves McGee
Marjorie A. McNees
Lillian Lucile McQuown
†Eugenie Frances Maingueneau
Edith Howard Smith
Jessie Edna Smith

ENGLISH

William Taylor Barry, Jr.
James William Bennett
Elinor Valoy Cogswell
Paul Henry Dowling
Florence Benedict Faitoute
†Robert Valentine Higgins
Vera Grayce Hively
†Frances Huntington
Kathrina Johnson
Harold Maurice Levy
Alice MacDougal
Ralph Caylor McSherry
†Margaret Putnam Merrill
Madeline Burleigh Morgan
Lewis Allen Myers
†Ruth Hayes O'Brien
Clara Lucille Prout
Ruth Spence
†Florence Lisle Webb

PSYCHOLOGY

†Luella Eva Behrens
Ruth Cain
Mila Lucille Coffin
†Lynnette Vandervoort

EDUCATION

L. Dorothy Albrecht
*Earle Wright Barker
Charles Joseph Brooks
†Catharine Ann Cavanaugh
*Ruth McArthur Copeland
†Earl Treff Dutton
*Christabel Elliott
Glenn Arthur Hughes
†Margaret Lucretia Kennedy
Ping Ling
Herman Frederick Minssen
H. Morris Monroe
John Kelley Norton
Ralph Smith Roberts
Megan Myfanwy Thomas
†Elizabeth Dorothea Wagner

GRAPHIC ART

Ruth Andrews
Eliza Edington Darling
†Dorothy Davy
Marion Victoria Dorn
Marjorie Louise Dunlap
†Dorothy Barnes Egbert
†Muriel Elizabeth Hall
Lena Brooks Hoefgen
Frances Mays Lewis
Gertrude Mary Mendenhall
Frederic Seymour Murray
†Myron Angelo Oliver

HISTORY

Ellen Louise Andrews
Earle Sevier Barney
†Mary Josephine Beebe
Alice Elia Butcher
Elizabeth Gail Casad
Gertrude Margaret Clancy
Virginia B. Clowe
Stella Louise Connelly
†Dorothy Joan Cooper
†Margaret Esther Cory
Elizabeth Edwards
Effie Grounds
George Charles Hodges
Edith Hilda Holloway
†Ruby Meta Kerr
Paul Gerhard Krehbiel
Myra Briggette McHale
Zetta Mable Mills
Albert Harold Morosco
Millard Osmore Peirce
Noble Goodwin Peterson
Dorothy Putnam
Dorothy Janet Simon
Alva Edgar Steadman
Nadine Margaretta Steininger
Florence Dean Stewart
†Madeline MacCrea Turner
†Marian J. Van Zwalenburg
Marion Melinda Vaughan
Morgan Chofield Webb
Lester Clark Whitten
†Ann Margaret Wood
*Thomas Edgar Workman
Olive Lillian Yoder
Abraham Zvenigorodsky

ECONOMICS

Christian John Bannick
†Brenton Stanley Carr
†John Derrol Chace
Henry Rowland English
John Willour Fribley
John Harvey Goodman
Samuel Wynfred Grathwell
Wilmer Jackson Gross
Georgia Haffner
Albert John Hettinger, Jr.
Ren Hirao
Saburo Hiratsuka
James Sloan Hutchinson
*Howard Homer Huxtable
Leslie Bryant Cullen Jones
Fay Wallace Kiser
Nora Elizabeth Kreps
Robert Krohn, Jr.
Robert Emmett Larimer
Floyd Mercer
Glenn Gardner Patterson
Forest E. Paul
Eric Torrens Pratt
Sidney Harrison Ring
William Ewart Gladstone Saunders
William Frederick Sisson
†William John Venard
James Vincent Wood
Frederick Noyes Worth
Dorothy Lee Womack

PRE-LEGAL CURRICULUM

Earl Clinton Adams
†Charles Abner Barker, Jr.
Walter Bishop
Lewis Pitt Black
Maurice Blumenthal
William Freeman Burbank
Quincy Cass
Charles Franklin Cook
David Porter Dunlap
John Francis Elden, Jr.
Albert Bernhardt Fisher
John Donovan Flint
†Arthur Abraham Goldsmith
Harlow Harvey Amos Hastings, Jr.
Elystus Lyon Hayes
†Edward Henderson
Arthur Lockwood Johnson
Karl Elias Leib
Walter Kinney Lewis
*Harold Lester Loud
John Homen Machado
Joseph McKinley Maltby
Roy Elwood Needham
Charles Henry Orme
Jonathan Edward Phillips
George Kenneth Scovel
Warren Paul Staniford
Cecil Ray Wakefield
*Wesley R. Whitaker
Fred Ferrell White
*Arthur Edwin Worthy

MATHEMATICS

Edward Raymond Boomershine
†Florence Sorrita Bundy
Culbert William Faries
Hazel Louise Hartwell
Evelyn Gladys Haydock
†Gladys Ethel McCue
Muriel Emily Turner

PHYSICS

†Raymond Eugene Best
Pearl May Weeks

CHEMISTRY

Frank Julius Anderson
Louisette Marie Aubert
Ernest Vernon Burlingham
Walter Frederick Dingley
Robert Oscar Easterday
†Laurence Gardner Heaton
Edwin William Kay
Crawford McMann Kellogg
Max Latshaw
Gaston Jack Levy
Harry Eugene McMahon
Paul DeVries Manning
†Ong Yet Nam
Ruth Oppenheimer
Norris Watson Rakestraw
Alfred de Ropp, Jr.
Christy Adolph Schempp
Ewing Carruth Scott
Herman George Siefert
†Arthur Edward Svenson
Robert Nicolas Wenzel

BOTANY

Claribel Ruth Boesch
Otho James Gilliland
Shizuko Ichihashi
Harry Gray Lachmund
Helen Doris Overman
†Serena Philips

PHYSIOLOGY AND HISTOLOGY

William Hutt Barnes
Harold Herbert Burrows
*Herbert A. Clattenburg
John Alfred Cooper
George Raymond Cowgill
Helen Lucile Denhart
John Maddux Graves
Bernard Johnson Rea
†Earl Frederick Roth
Sarah Louise Simonds
Albert James Supple
John Marshall Tufts
Henry Morgan Winans
†Sosabro Yamada

BACTERIOLOGY AND IMMUNITY

Harry Carson Coe
†Yoshio Kusama

ZOOLOGY

*Laura Elizabeth Clark
Carl L. Hubbs
Harold Lorraine Weatherford

ENTOMOLOGY AND BIONOMICS

Gordon Floyd Ferris
Ximena Myrtle McGlashan
Robert Kingston Vickery

GEOLOGY AND MINING

Umekichi Fukazawa
Henry James Hawley
George Warren La Peire
Wayne Frederick Loel
William Richard Longmire
George Byron Lyman
John Shore McKenna
John McHenry Nisbet
†Frank Wixom Reeves
Walter Winthrop Scott
Jack Miller Sickler
Frederick Siemon
Xaver Brand Starnes
Charles Edward Wheeler

CIVIL ENGINEERING

Elliott Bandini
Henry Berbert
Ward Belnap Blodget
Emil Charles Brandt
Edward Blake Brier
Henry Brinkmeyer, Jr.
Albert Eugene Christensen
John Wallace Dodge
Victor Arthur Endersby
William Daly Fletcher
Gerald Forbes Gill
Rex Gerome Hamaker
Conrad Palmer Hardy
Harry Pendleton Hart
Clifton Minto Irwin
Gustave Adolph Jacomini
Verner Blackmore McClurg
Arthur Donald Macintyre
Harry Olsen
Will Bruce Piper
James Harrold Rea
†James Kempe Richardson
Edward William Sharp
Saichi Shimodao
Clarence Edward Stewart
Louis Stocklmeier
Ernest Gilbert Waters
Ben Charles Williams
Ralph Buck-hond Wong

MECHANICAL ENGINEERING

Milton Palmer Baker
Gollin Bell
†Charles Frederick Bevan
Clarence M. Burton
Harold Farley Elliott
Errol Southworth Evans
Isamu Mayeda
Norman Jerome Mittenthal
Tsurukichi Miwa
Walter Edward Peterson
Harry John Rathbun
Joseph Amey Shepard
Ashton Richardson Tatnall
Carl Francis Williams

ELECTRICAL ENGINEERING

Ray J. Chapman
Francis Kildare Flynn
Ernest Lafayette Neill
Frederick Antone Niepp
Harold Dexter Shriver
Archer Bell Stuart
Paul Wormser

BACHELOR OF LAWS

Frederick Baruch, Jr.
Philip Slaughter Brooke
Arthur Leslie Erb
John Calvin Hammel
Clifton McPherson Miller
Eugene Elliott Pratt
Morgan Allan Sanborn

MASTER OF ARTS

GREEK

Annie Arrants, A. B.
Emily Virginia Poindexter, A. B.

LATIN

Julian Elliott, A. B.
(Vanderbilt University)
Millett Henshaw, A. B.
(University of Colorado)
Helen Frances Laskey, A. B.
Harriett Elizabeth Maines, A. B.
Eva May Newman, A. B.

GERMAN

Raymond Walker Barry, A. B.
(Ohio Wesleyan University)
Marie Genevieve Eustace, A. B.
Susie May Everson, A. B.
Ottilie Katharine Hoernig, A. B.
Morris Elmer Hurley, A. B.
Anna Marie Rehmke, A. B.
Henrietta Rehmke, A. B.
Dorothy Esther Stendel, A. B.
Garnet Emma Trott, Ph. B.
(University of Chicago)

ROMANIC LANGUAGES

†Anna Ruth Barker, A. B.
Irene Thorburn de Camp, A. B.
(Pomona College)
Eugene Jean Oberlé, A. B.
John Armstrong Sellards, A. B.
(University of Illinois)

ENGLISH

Margery Bailey, A. B.
Hazel Myra Ball, A. B.
Marie Louise Breniman, A. B.
(College of the Pacific)
Mary Callaway, A. B.
(Mississippi Industrial College)
Mary Louise Curry, A. B.
Laura Lillian Ellias, A. B.
Pauline Gartzmann, A. B.
William Thomas Ham, A. B.
(College of the Pacific)
Florence Yost Humphries, Ph. B.
(Cornell University)
†Martha Judith Job, A. B.
Cecilia Catherine Kays, A. B.
(Trinity College, Washington, D. C.)
Mabel Frances Loop, A. B.
Philip Doss-Bradley Perham, A. B.
Genevieve Schellbach, A. B.
Lulu Belle Smith, A. B.
(Parsons College)

EDUCATION

William Elliott Baker, A. B.
Mary Bufick Chamberlain, A. B.
(Indiana University)
†Ora Whitley Hooker, A. B.
George Washington Kieffaber, A. B.
(Mt. Morris College)
Alfred Sampson Krause, A. B.
(Nebraska Wesleyan University)
William Martin Proctor, A. B.
(Whitman College)
Alva Mary Richards, A. B.
Maurice Holmes Rowell, B. S.
(Beloit College)
Samuel Oliver Welday, A. B.
(Ohio University)

HISTORY

Walter Mackay Case, A. B.
(College of the Pacific)
*Ethel Ray Dugan, A. B.
(Smith College)
*Alice Jollyman, A. B.
Marion C. Montgomery, A. B.
*Monette Osie Todd, A. B.

ECONOMICS

Alice Leone Fleenor, A. B.
(University of California)

MATHEMATICS

Laura Cornelia Clark, A. B.
Julia Hamilton Conkling, A. B.
Rachel King, A. B.
Masahachi Perry Mukaiyama, A. B.
(College of the Pacific)
Marian Muriel Tew, A. B.

CHEMISTRY

†Fred Huestis Eldred, B. S.
(Occidental College)
Allen Edwin Stearn, A. B.
Peter J. Wedel, A. B.
(University of Kansas)

BOTANY

Mabel Edith Clark, A. B.
Ralph Ernest Noddin, B. S.
(University of California)
Roxana Judkins Stinchfield, A. B.
Jessie Ida Wood, A. B.

ZOOLOGY

Edna Anne Hannibal, A. B.

ENTOMOLOGY

Kearn Babcock Brown, Ph. B.
(Alfred University)
Florence Cotton Burrell, A. B.
Laura Florence, B. S.
(University of Aberdeen)
Esther Lee Guthrie, A. B.

GEOLOGY

*Carl Hugh Beal, A. B.
*Hector Crandall, A. B.
Wah Seyle Lee, A. B.

ENGINEER

CHEMICAL ENGINEERING

George Albert Connell, A. B.

CIVIL ENGINEERING

*Roland Roy Blase, A. B.
James Cowin, Jr., E. M.
(University of Minnesota)
†Clifford Peter Goplerud, A. B.
George William Hawley, A. B.
Roger Wolcott Olmsted, A. B.
Arthur Charles Sandstrom, A. B.

MECHANICAL ENGINEERING

†Boynton Morris Green, A. B.
Hugh Murphy Henderson, A. B.
Homer John Ling, A. B.
John Lynn Reynolds, A. B.
William Halford Warren, A. B.

ELECTRICAL ENGINEERING

†William Andrew Potts, B. E.
(Adelaide University)

JURIS DOCTOR

†Laurel Edwin Anderson, A. B.
Vernon Mars Brydolf, A. B.
*Carlos Cooper Close, A. B.
†Joseph Paul Cottrell, Jr., A. B.
H. Ben Cox, A. B.
†Alexander Woolfolk Davis, A. B.
†Charles Skinner Davis, A. B.
Carl Edwin Day, A. B.
Abram Lee Golden, A. B.
(Colorado College)
Elmer Wilson Heald, A. B.
Charles Albert Hill, A. B.
†Ralph Henry Lachmund, A. B.
Harold Lester Loud, A. B.
Oakley Kendall Morton, Ph. B.
(University of Chicago)
†Bernard Charles Nichols, A. B.
Richard Evan Roberts, A. B.
George Paul Ross, A. B.
Sidney Joseph Winter Sharp, A. B.
Walter Henry Stammer, A. B.
James Barnes Tucker, A. B.
(Cornell University)
†Wilford Hamilton Tully, A. B.
Elmer Thomas Worthy, A. B.
Howard K. Zimmerman, A. B.
(University of Oregon)

DOCTOR OF MEDICINE

Charles Albert Ainslie, B. S.
(University of California)
Luther Musson Boyers, A. B.
William Archdall Boyle, B. S.
(University of California)
Joseph Ignatius Callanan, A. B.
(St. Mary's College)
John Frye Chapman, A. B.
George Willis Cline, A. B.
Florence Edetha Dunlop, A. B.
Harold Augustus Fletcher, B. S.
(University of California)
Leonard R. Jenkins, A. B.
Harold Lund Jensen
Willard E. Kay, Jr., A. M.
Charlotte Smith Linden, B. S.
(University of California)
Charles Thomas Moul, A. B.
(St. Mary's College)
John Edwin Paulson, A. B.
Alfred Liles Phillips, A. B.
Merton James Price, A. B.
Edward S. Salomon, B. S.
(University of California)
Karl Ludwig Schaupp, A. B.
Otis Allen Sharpe, B. S.
(University of California)
Walter Charles Smallwood, B. S.
(University of California)
John Philip Strickler, A. B.
Benjamin Harrison Viau, B. S.
(University of California)
†Elsa Barbara Will, A. B.
Harry Alphonso Wyckoff, A. B.

DOCTOR OF PHILOSOPHY

LATIN

William Chislett, Jr., A. M.

EDUCATION

J. Harold Williams, A. M.

ECONOMICS

Jacob Anton de Haas, A. B.
(A. M., Harvard University)

Irma Helen Hotchkiss
(B. S., Columbia University; A. M., Northwestern University)

PHYSICS

Philo Fay Hammond, A. B.
(University of Washington)

CHEMISTRY

†Harry Johnson Sears, A. M.

William John Van Sicklen, A. M.

FELLOWS AND SCHOLARS

Thomas Welton Stanford Fellowship in Psychic Research

John Edgar Coover . . . . Stanford University
A. B., Stanford, 1904, A. M., 1905, Ph. D., 1912.

Buckel Fellowship in Education

Samuel C. Kohs . . . . Palo Alto
B. S., College of the City of New York, 1912.

Alumni Jordan Scholarships in Medicine

Thomas Adam Card . . . . San Francisco
A. B., Stanford, 1915.
Roscal Leroy Draper . . . . San Francisco
A. B., Stanford, 1913.

Leland Stanford Junior Memorial Scholarship

Sigurd von Christierson, '17 . . . . . . San Jose

W. J. Dickey Scholarships

James Clarke Berry, '18 . . . . Selma
Jean Lacey Vincenz, '18 . . . . Fresno

B. G. Higley ('99) Scholarship

Gwendolen Harriet Garsed, '19 . . . Stanford University

Joseph Bonnheim Memorial Scholarships

Joseph Goldstein, '18 . . . . Sacramento

Rhodes Scholarships at Oxford University

Emil Frederic Hollmann . . . . Oakland
A. B., Stanford, 1911.

Bertha Hyde Braly Scholarship

Eloise T. Langmade . . . . Palo Alto
A. B., Smith, 1909.

Mrs. McDowell Roble Club Scholarship

Doris Elfrida Estcourt . . . . Berkeley

Law School Scholarship

Albert Grover Bradford . . . . Eureka
A. B., Stanford, 1915.

STUDENTS

Name; home residence; major subject; status; University residence; post-office. Post-office in all cases *Stanford University* except where university residence is followed by initial letter of town ('p' indicates *Palo Alto* post-office; 'Mayfield-m,' *Mayfield* post-office, etc.) Street address *Palo Alto* or *Campus* unless otherwise named.

Status.—gr., graduate student; sp., special student; unc., unclassified law. The figures after major subject indicate the number of units of university work completed (and counting toward the 120 units required for graduation), no account being taken of 'deferred,' 'incomplete,' or 'conditioned' work. The star (*) indicates registered *in absentia;* the dagger (†) indicates unadjusted standing from other colleges and universities. (Phys.-Physics; Phyl.-Physiology.)

The superior number ^{1}, prefixed to the name of a student indicates registration for the first semester only; ^{2} indicates second semester only.

Abbott, William Lindley	SanFrancisco	PreL. 23	Phi Delta Theta
Abe, Kingo	Niigata, Japan	Econ. 105	Japanese Club-m
Abrams, Harry Williams	Naco, Ariz.	Geol.sp.14	Theta Delta Chi
Adams, Agnes Irene	Coalinga	Econ. 49	68 Roble
Adams, Philip Van R.	Denver, Colo.	Engl. 108	351 Encina
Adams, Sidney Francis	StanfordUniv.	Geol. 104	9 Alvarado
^{1}Adams, Walter Crawford B. S., Michigan, 1914.	Lodi	Med. gr.	S.F.Hosp.,S.F.-sf
Adams, William Bryan	San Jose	Engl. 20	Delta Tau Delta
Adams, William Forbes	StanfordUniv.	Hist. 46	9 Alvarado
^{1}Adamson, Lilburn Leroy	Lower Lake	PreL.	335E.SanFern.,SanJ
Aguerrevere, Pedro I.	Caracas, Venez.	Geol. †15	El Camino
Aguirre, Jose Miranda	Douglas, Ariz.	C. E. 4	22 Lasuen
Albee, Helen Virginia	Eureka	Engl. 122	11 Roble
Albouze, Achille R. J.	San Francisco	Chem. 15	39 Encina
Alderton, Henry Arnold, Jr.	Palo Alto	C. E. 86	Phi Gamma Delta
Alexander, Paul Rothwell	St. Helena	PreL. 43	Chi Psi
Allen, Eleanor May	Pasadena	Engl. 11	87 Roble
Allen, Niel R.	Grants Pass, Ore.	Law 75	134 Encina
Allen, Verner	Palo Alto	Educ. 70	222 Kingsley-p
Allhands, Marian H.	Portland, Ore.	Math. 110	54 Roble
Allin, Hazel	Pasadena	Span. 106	Alpha Phi
Alsop, Archibald Stuart	Bemedji, Minn.	M. E. 41	18 Alvarado
Ames, Elmer Ruel	Sacramento	C. E. 100	231 Encina

Ames, Katherine Elizabeth	LosAngeles	Engl. 57	Delta Delta Delta
Ames, Phyllis Edith M.	Palo Alto	Span. 7	352 Fulton-p
[1]Ames, Walter Irving	Ontario	PreL. 56	178 Encina
[2]Amphlett, Janet Edyth	San Mateo	Engl. 39	70Syc.av.,S.M.-sm
[2]Andersen,AgnesCamille	Spokane,Wash.	Math. †	61 Roble
Andersen, Emelie E.	Spokane, Wash.	Engl. 47	65 Roble
Anderson, Adrien Louis	SanFrancisco	M. E. 122	Delta Tau Delta
Anderson, Charles M.	Los Angeles	C. E. sp. 9	Phi Delta Theta
Anderson, Emil Shirley	Los Angeles	M. E. 94	425 Encina
Anderson, George Harold	Elko, Nev.	Hist. 103	529 Addison-p
Anderson, Hobson Dewey	San Jose	Econ. 8	44 N. 12th, S. J.-sj
Anderson, John A.	Rossland,B.C.,Can.	PreL. 12	22 Encina
Anderson, Laura Patricia C.	Venice	Engl. 57	KappaKappaGam.
Anderson,MinervaM.	Regina,Sask.,Can.	Latin gr.	847 Bryant-p
A. B., Stanford, 1916.			
Andrews, Fred Page	Tacoma, Wash.	M. E. 92	Delta Upsilon
Andrews, George Lindley	Los Angeles	Geol. 1	Alpha Delta Phi
Andrus, Carlton Leverett	San Jose	Med.gr.	2446Washn.,S.F.-sf
A. B., Stanford, 1915.			
[1]Angell, Charles	Palo Alto	Econ. 5	1200 Bryant-p
[1]Angwin, Florence Schneider	Palo Alto	Bot. gr.	133 Everett-p
A. B., Stanford, 1907.			
Ankele, Cordes W.	San Francisco	Phyl. 24	Chi Psi
Anspach, Wilmur Claire	Riverside	Law 117	323 Encina
Antrim, Walter Ellett	Cairo, Ill.	Ed.G. A. 48	ThetaDeltaChi
Aoki, Yoshio	Nagano, Japan	Phil. gr.	733 Ramona-p
A. B., College of Pacific, 1916.			
Appleton, Louis Ellsworth	San Jose	M. E. 16	436 Encina
Arata, Winfield Hector	SanLuisObispo	M. E. 17	514 Encina
Arnald, John Stuart	Winston, Mont.	PreL. 47	Phi Kappa Sigma
Arnold, Edward Willingham	Riverside	Law 61	Kappa Alpha
Arnott, Peter Roy	Palo Alto	Chem. 5	325A Guinda-p
Asami, Goichi	Honolulu, T. H.	Phyl.-Med.101	1a Alvarado
Ashford, Harry Thomas	Redwood City	Educ. 111	516E.Fuller,R.C.-r
[1]Atchison, Grant Andrew	San Francisco	M. E.	Sigma Alpha Epsilon
[2]Aten, Albert Boyce	Calipatria	Law 94	435 Encina
Aten, Imogen	El Centro	Econ. 10	Chi Omega
[1]Aten, Ira D.	El Centro	Econ. 30	Encina
[1]Atkinson, Doris	San Bruno	Ed.-G.A. 81	475Hamilton-p
[2]Atwater, William Charnley	Hollywood	Econ. 26	AlphaTauOmega
Aubert, Lloyd Lees	San Mateo	PreL. 12	San Mateo-sm

[2]Aupperle, Harold Vincent	Gr. Jct., Colo.	Econ. 83	Phi Gamma Delta
[2]Aurell, Alvin	McPherson, Kan.	Econ.	College Terrace
Aurell, Verner C.	McPherson, Kan.	Econ. 75	328 Encina
[1]Austin, Philip Henry	Greenville, Pa.	Chem. 34	218 Encina
Auzerais, Phyllis Madeleine	Menlo Park	Hist. 75	Kappa Kap. Gam.
Avison, Edith S.	Berkeley	Ed.-G. A. †13	10 Roble
Azevedo, John Anthony	Sacramento	Phyl. 61	150 Encina
Azevedo, Joseph L., Jr.	Oakland	Phyl. 4	751 Ramona-p
Azevedo, Manuel Leal	Sacramento	Phyl.-Med.†57	751 Ram'na-p
Backlund, William Balder	Kingsburg	Econ. 82	421 Encina
Bacon, Asaph Perry	Los Angeles	Law †39	Theta Delta Chi
Bacon, Clarence Winfield	Cook	Law 76	251 Encina
Bacon, Ellard Ansel	Oakland	C. E. sp. 136	Theta Delta Chi
Bacon, Ruth	San Jose	Phyl. 103	Gamma Phi Beta
Baer, Sidney Howard	Hoquiam, Wash.	Phyl. 11	409 Encina
Bailey, Harvey Dillon	Asotin, Wash.	Law †11	552 Hamilton-p
Bailiff, Laurence Deane	Los Angeles	Span. 87	Cooksey Lodge
Baiocchi, Adolph John	San Jose	Med.†87	506, 12th Ave., S.F.-sf
A. B., Santa Clara, 1914.			
[1]Baker, Carl Clifford	Portland, Ore.	Law gr.	707 Bryant-p
A. B., Oregon, 1914.			
Baker, Harry Vincent	Grimes	Phyl. 35	23 Encina
Baker, Stanley Ward	Spokane, Wash.	Econ. 15	Alvarado Club
[1]Bakewell, Maitland Dale	Riverside	Econ. 5	30 Encina
Balbach, Louis James	Portland, Ore.	Econ. 16	Hotel Palo Alto-p
Bald, Margaret	Nordhoff	Span. 39	35 Roble
[1]Balthis, B. Douglass	Glendale	Econ. 32	71 Encina
Bandini, Elliott	Los Angeles	C. E. gr.	Chi Psi
A. B., Stanford, 1916.			
Barber, Allyn Harshel	Los Angeles	Law 78	Zeta Psi
Barber, William Richmond	Mayfield	Chem. 32	357 Encina
Barker, Chester Wing	San Jose	Engl. 82	321 Encina
Barker, Waldo Welton	Pacific Grove	Math. 16	Theta Xi
[2]Barkway, Emily Wilhelmina	Mt. View	Ger. †	Mountain View-mv
Barnard, Leonard Bryan	Niles	PreL. 6	130 Encina
Barnes, Leonard Stanford	Compton	Law 76	40 Encina
Barneson, Harold James	San Mateo	Econ. 22	Beta Theta Pi
[2]Barney, Earle Sevier	Union City, Tenn.	Law gr.	22 Encina
A. B., Stanford, 1916.			
Barnhouse, Alice Naomi	Watsonville	Ger. 105	26 Roble
Barr, Allan Stone	Upland	Econ. 95	506 Encina

[1]Barr, Faris Carlin	Freeport, Ill.	Geol. 28	El Camino
Barrett, Dave Dean	Omaha, Neb.	Econ. †12	Sigma Chi
Barroll, Elizabeth Bone	Palo Alto	Econ. 26	301 Lowell-p
Barry, David Noble, Jr.	Los Angeles	Econ. 17	Delta Tau Delta
Barry, George Long	San Jose	Med.gr.	2446Wash'n,S.F.-sf
A. B., Stanford, 1914.			
Barry, William Taylor, Jr.	Santa Barbara	Engl. gr.	427 Webster
A. B., Stanford, 1916.			
Barton, John Tracy	Milton, Ore.	Law 50	El Camino
Barton, Lorenzo James	San Mateo	Chem. 84	San Mateo-sm
Barton, Paul Wilton	Pomona	Law †12	331 Hamilton-p
[2]Bascos, Pedro B.	Villasis, P. I.	Zool.	1080 Emerson
Batchelder, Albert Perkins	Millbrae	Ent. 57	Millbrae
[1]Batchelder, Kittredge	Santa Barbara	Fr. 28	Phi Gamma Delta
Bateman, Frederick W.	Salida, Colo.	Econ. 35	Phi Delta Theta
Bates, George Brigham	Pasadena	Econ. 9	47 Encina
Bauer, Lloyd Chester	Pasadena	Zool. 38	Phi Kappa Psi
Baughman, Elmer Jacob	Mayfield	M.E.32	280ParkBlvd.,Mayf.
Baumgartner, Frank Leroy	San Jose	Law 107	Sigma Nu
Beach, Rofena Maude	San Jose	Lat. 102	Pi Beta Phi
Bean, James	San Jose	M. E. 35	755 Univ., S.J.-sj
Bearnson, Julius B.	Spanish Fork, Utah	Econ. gr.	515 Waverley-p
B. S., Utah Agricultural College, 1916.			
Beaudikofer, Ernest Leslie	San Jose	PreL. 45	318 Lincoln-p
Beaver, Mary Ann	Palo Alto	Hist. 113	475 Forest-p
Beaver, Mildred	Palo Alto	Hist. 92	475 Forest-p
Becker, George Henry	San Francisco	Med. gr.	667 Hamilton-p
A. B., California, 1916.			
Becker, Helen Rouse	Long Beach	Engl. 13	72 Roble
Beckstrom, Elmer Gustaf	Kingsburg	Chem. 105	College Terrace
Beckwith, Palmer	Los Angeles	Geol. 41	Sigma Alpha Ep.
Beebe, Mary Josephine	Woodland	Econ. gr.	51 Roble
A. B., Stanford, 1916.			
Beidler, J. Francis	Hinsdale, Ill.	Econ. 47	635 Bryant
Belford, John Stuart	Reno, Nev.	PreL. 4	220 Encina
Bell, Georgia Washington	St. Helena	Econ. 44	26 Madrono
Bell, Thomas Gregory	Sacramento	Chem. 12	52 Encina
Bellingall, Lolita	Oakland	Span. 46	Kap. Alpha Theta
Bender, Lauretta	Los Angeles	Econ. 15	5 Cabrillo
Benedict, Charles W., Jr.	Fresno	PreL. sp. 11	412 Cowper-p
[2]Benedicto, Arsenio	Valladolid, P. I.	M. E. †	705 Cowper-p

Bennett, Edwin Oliver A. B., Stanford, 1917.	Los Angeles	M. E. gr.	309 Encina
Bennett, Francis Henry	Medford, Ore.	Econ. 10	Phi Kappa Sigma
[2]Bennett, Margaret E.	AnnArbor,Mich.	Hist. †	1044 Webster-p
[1]Bensinger, Harrold J.	Los Angeles	Chem. 41	Kappa Sigma
Berbert, Henry A. B., Stanford, 1916.	San Mateo	C.E.gr.	129ClarkDr.,S.M.-sm
Berendsen, Lloyd Hinz	San Francisco	Econ. 45	Chi Psi
Bergstrom,FrancisWilliam	StanfordU.	Chem. 86	25 Salvatierra
de Bernardi, Alice A. B., Stanford, 1916.	Santa Rosa	Span. gr.	Madrono
Berni, Albert Frederick	Portland, Ore.	C. E. 106	18 Alvarado
Bernstein, Ernest Mortimer	Oakland	Econ. 10	47 Encina
Berry, James Clarke	Selma	M. E. 63	217 Encina
Bettannier, Leo Claudy	Pasadena	Geol. sp. 43	318 Encina
Betts, Charles Russell	Estacada, Ore.	M. E. †30	303 Hamilton-p
Betts, Forrest Arthur	Phoenix, Ariz.	PreL. 40	433 Encina
Bevier, George, Jr. A. B., Stanford, 1912.	Spokane, Wash.	Med. gr.	1939 Clay, S.F.-sf
Bevier, Raymond K.	Spokane, Wash.	Psych. 32	444 Encina
Bianchi, Henry Edwin	SanLuisObispo	PreL. 49	427 Encina
Biggar, Margaret May	Lankershim	Engl. 111	Kap. Kap. Gamma
Bigler, Evelyn Montell	Palo Alto	M. E. 56	534 Channing-p
Bihlman, George Herman	Live Oak	Ent. 88	335 Encina
Bills, Florence Elizabeth	Sacramento	Engl. 40	Kap. Alpha Theta
Bingham, Randolph V.	Portland, Ore.	M. E. †10	Beta Theta Pi
[2]Binkley, Robert Cedric	Palo Alto	PreL. 15	203 Tennyson-p
Binning, Maybelle Marie	San Mateo	Ger. 41	205 Elm, S.M.-sm
Bird, Milo Alfred	Melones	Chem. 12	60 Encina
Bishop, Marjorie	La Habra	Engl. 102	9 Salvatierra
Bissinger, Edward LeeHudson	Lompoc	PreL. 17	226 Encina
[1]Bittinger, Merritt Azro	Los Angeles	PreL. 1	4 Salvatierra
[1]Black, Floyd Davidson A. B., Kansas, 1913.	Palo Alto	Law gr.	712 Bryant-p
Black, Lewis Pitt A. B., Stanford, 1916.	Monrovia	Law gr.	418 Encina
Blaisdell, Frank E.	San Francisco	Phyl. 75	415 Encina
Blenkiron, Paul McKinly	Los Angeles	PreL. 17	Beta Theta Pi
[1]Blote, Harold Carl	Oakland	Law 70	Sigma Chi
Blumenthal, Maurice A. B., Stanford, 1916.	Douglas, Ariz.	Law gr.	222 Encina

[1]Boal, Marian Dickinson	National City	Hist. 120	AlphaOmicronPi
A. B., Stanford, 1917.			
Bocks, Marion Elise	Cupertino	Ed.G. A. 73	Cupertino-c
Boehm, Herbert Carl	Upland	Law 71	24 Encina
Boesch, Claribel Ruth	San Jose	Bot. gr.	39 Roble
A. B., Stanford, 1916.			
Bolinger, Donley	Orange	Law 75	559 Encina
[1]Bolter, Lemuel Rose	Logan, Ia.	Econ. 123	25 Salvatierra
Bonnett, Irene Bates	Riverside	Engl. 43	Delta Gamma
[1]Bonnett, William Henry	Riverside	Econ. 69	320 Encina
Bonney, Fred Laman	Portland, Ore.	PreL. 48	Kappa Sigma
[2]Bontz, Conrad Kauffmann	Palo Alto	Geol. 76	581 Hawthorne-p
Bontz, Mildred Katherine	Palo Alto	Lat. 72	581 Hawthorne-p
[2]Boone, Walter Fredrick	Palo Alto	Geol.	430 Forest-p
[1]Borde, Harry Joseph	Santa Monica	Law gr.	20 Alvarado
A. B., Stanford, 1914.			
Borland, Norman Burns	Martinez	Law 112	129 Encina
Borst, Deborah Adaline	Coalinga	Hist. 6	81 Roble
Bothwell,FloydBishop	SaltLakeCity,U.	Geol. 14	Phi Kappa Sigma
Botsford, Dorothy	Los Angeles	Econ. †28	Kap.AlphaTheta
Boudreaux, Charlotta Belle	MenloPark	Hist. 28	30 Roble
Boulware, George Lynn	Palo Alto	Geol. 33	170 Bryant-p
Bowden, Jerome Trimble	San Jose	PreL.15	1285Alameda,S.J.-sj
Bower, Helen Modjeska	Los Angeles	Hist. †9	5 Madrono
Bowes, Frederic Raymond	Alameda	M. E. 43	334 Encina
Bowes, Glenn Howard	Monrovia	Geol. 36	216 Encina
Bowling, Charles Henry	Pasadena	Geol. 26	Beta Theta Pi
Boyce, John Shaw	San Francisco	Bot. gr.	6 Stanford Union
B. S., Nevada, 1911, M. F., 1912.			
Boyd, Edwin Forrest	Palo Alto	Med. gr.	2201Calif., S.F.-sf
A. B., Stanford, 1915.			
Boyd, Hugh Thomas	Spreckels	Engl. 55	22 Lasuen
Boyd, Veronica E.	San Carlos	Math. †10	San Carlos-s
Boydston,CharlesRaymond	Porterville	PreL. 39	Phi Gamma Delta
Boyle, James Thomson	Los Angeles	PreL. 10	18 Alvarado
Boynton, Kinnison Swett	Ferndale	Chem. 44	334 Lincoln-p
Braden, Joseph Ross	Santa Clara	Law 114	Phi Kappa Psi
Bradford, Albert Grover	Eureka	Law gr.	345 Encina
A. B., Stanford, 1915.			
Bradley, Glen John	Princeton, Ill.	Ger. 6	635 Bryant-p
[1]Braislin, Dana Boardman	Pasadena	Phyl.	Phi Gamma Delta

Brasefield, Beatrice Maddock	Palo Alto	Greek 105	552 Everett-p
Brazil, Valdevino Haggberg	Castroville	PreL. 13	704 Bryant-p
Brekke, Mabel Adella A. B. Stanford, 1913, A. M., 1914.	San Jose	Greek gr.	31 Villa, S. J.-sj
Breneman, Walter E.	Kirkwood, Mo.	PreL. 50	326 Encina
Breuner, John, Jr. A. B., Stanford, 1913.	San Francisco	Law gr.	OlympicClub,S.F.-sf
Brewer, Alexander Leland	Ogden,Utah	Econ. 7	Phi Gamma Delta
Brewer,Edward,Jr. A. B., Harvard, 1914.	JamaicaPlains,Mass.	Law gr.	220 Emerson-p
Bridgers, Alice Irene	Imperial	Engl. 96	325 Hamilton-p
Bridgers, Curtis A.	Imperial	PreL. 13	325 Hamilton-p
[2]Briggs, Otis Emmons	Palo Alto	Geol. 93	424 Seneca-p
Briggs, Samuel Eustace	Pasadena	Chem. 51	406 Encina
Bright,WilliamOldham	FortScott,Kan.	Chem. 38	18 Alvarado
Brill, Selling	Portland, Ore.	Chem. 14	Theta Xi
Brinkmann,HeinrichWilhelm	Riverside	Math. 13	Escondita Road
[2]Britt, Ivan Alsingham	Stuttgart, Ark.	PreL. 27	841 Bryant-p
[1]Brix, Emma Marguerite A. B., Stanford, 1917.	Fresno	Ger. 120	Chi Omega
Brix, Karl Herman	Fresno	PreL. 6	Kappa Sigma
Brokenshire, John Roberts	San Jose	PreL. 47	105 Grant, S. J.-sj
Brokenshire, Mark Guy	San Jose	Geol. †30	105 Grant, S.J.-sj
Brooks, Earl Alvin	Visalia	Engl. 8	149 Encina
Brooks, Ida Leone A. B., Minnesota, 1911.	Aberdeen, S. D.	Phyl. gr.	5 Madrono
Brooks, Irene Lucile	El Centro	Fr. 75	87 Roble
Brower, William Miller	Pasco, Wash.	M. E. 38	251 Emerson-p
Brown, Claude Everett A. B., Stanford, 1914.	San Francisco	Med. gr.	Co.Hosp.,Sacto.-s
Brown, Frank Wüllmers	Riverside	Econ. †11	Theta Xi
Brown, Harold Austin	Los Angeles	Geol. 46	Phi Delta Theta
Brown, James Pomeroy	Portland, Ore.	Chem. 13	355 Encina
Brown, Lorraine Leonore	San Diego	Engl. 74	Sigma Kappa
Brown, Margaret Wallace	San Diego	Econ. 12	Gamma Phi Beta
Brown, Mary Ethel	Palo Alto	Hist. 26	Sigma Kappa
[1]Brown, Philip Foster	Reno, Nev.	Law 62	Alpha Delta Phi
Brown, Spencer Dodge	Pasadena	PreL. 40	Alvarado Club
Browne, Ashley Colt	Palo Alto	Ent. 37	345 Lincoln-p
Browne, Frances Amelia	Palo Alto	Ed.-G. A. 75	345 Lincoln-p
Brun, Otis Gorham	Berkeley	Law 92	Kappa Sigma

Brunenkant, Edward J.	Florence, Ariz.	Law 71	65 Encina
Bruns, Walter Emil	Oakland	PreL. 45	Alpha Delta Phi
Bryan, Carleton Felton	San Francisco	Law 79	Sigma Alpha Ep.
[1]Bryan, Darwin	Oakland	Geol. 8	Phi Kappa Psi
[1]Bryner, George Elm	Pasadena	Geol. 8	Delta Kappa Ep.
Buckles, Emmett Samuel J.	Ames, Kan.	Educ. †12	533 Ramona-p
Bucklin, James W., Jr.	Grand Junction, Col.	PreL. 7	581 Forest-p
Budd, Raymond	Montevideo, Minn.	Econ. †40	25 Salvatierra
Buffum, Harry Austin	Long Beach	Law 81	Delta Chi
Buffum, Thurlyne	Long Beach	Fr. 55	Pi Beta Phi
Bulkley, Milton	Oakland	C. E. 9	Alpha Delta Phi
Bullis, James Stevenson	Los Angeles	Law 112	Beta Theta Pi
Bullis, Richard Omri	Los Angeles	Phyl. 73	323 Hamilton-p
[1]Bullis, Rowena Elizabeth	Alhambra	Engl. 9	Alpha Phi
Bunds, Clifford Cortney	Santa Clara	Chem. 14	1390 Sta Clara, SC-sc
Bunds, Lester Archie	Santa Clara	Chem. 14	1390 Sta Clara, SC-sc
Burbank, William Freeman	San Jose	Law gr.	561 Encina
A. B., Stanford, 1916.			
[1]Burch, Everett Tunison	Portland, Ore.	Chem. 18	Chi Psi
Burdick, Muriel Pierce	Long Beach	Ger. 44	53 Roble
Burke, Helen M.	Los Angeles	Fr. 10	Alpha Phi
[2]Burns, Charles	San Jose	Engl. gr	Col. Pac., S. J.-sj
A. B., College of Pacific, 1916.			
Burrell, Chester Alton	San Jose	M. E. 44	196 S. 8th, S.J.-sj
Burrill, William V., Jr.	Tacoma, Wash.	Chem. 15	Zeta Psi
Burroughs, Spencer E.	Susanville	Law 96	656 Bryant-p
Burrows, Harold H.	Salt Lake City, Utah	Anat. gr.	230 Encina
A. B., Stanford, 1916.			
Burton, Julian Y.	Salt Lake City, Utah	Phyl. 45	Beta Theta Pi
Burton, Margaret Florence	Los Angeles	Hist. 13	Gamma Phi Beta
Burwell, Olive Cynthia	Alameda	Zool. 16	483 Addison-p
Bush, James Daniel	Berkeley	Engl. 104	545 Encina
Butterfield, Irvis Wilder	Palo Alto	Geol. 38	835 Middlefield-p
[2]Bynum, Lindley Davis	Monrovia	Engl. †15	218 Encina
Byrd, Clarence M.	Salem, Ore.	Law gr.	El Camino
A. B., Olivet, 1915.			
[1]Cady, Loris Vaughn	Los Altos	PreL. sp. 36	Los Altos-l
Cahn, Monroe Leopold	San Francisco	Econ. 10	124 Encina
Calderwood, Ada Imogene	Palo Alto	Ed.-G.A. 76	531 Cowper-p
Caldwell, David Lynam	San Mateo	Chem 14	152 Ellsw'th, SM-sm
Calhoun, Ellen Mein	Seattle, Wash.	Engl. 15	84 Roble

Calvert, John George	Inglewood	Phys. 40	532 Homer-p
[1]Cameron, Adrian Edgar	Pasadena	Econ. 5	Phi Kappa Psi
de Camp, Helen Brown A. B., Pomona, 1915.	Claremont	Econ. gr.	Chi Omega
Campbell, Allister Burnett	San Jose	Econ. 16	325 Encina
Campbell, Floyd Paul	Portland, Ore.	PreL. 6	Kappa Sigma
Campbell, Frank Valpey A. B., Stanford, 1915.	San Jose	Law gr.	111So.15th,S.J.-sj
Campbell, Harry Archibald	Santa Cruz	Geol. 55	245 Encina
Campbell, Jean	San Francisco	Hist. 74	Kap. Alpha Theta
Campbell, Leon George	Oakland	Phyl.-Med. 106	Zeta Psi
[1]Capwell, Cebert Edwards	Oakland	Econ. 1	Kappa Sigma
Carbee, Gwin Wilbur	Los Angeles	C. E. 90	324 Encina
Card, Thomas Adam A. B., Stanford, 1915.	Palo Alto	Med.gr.	2218Webst'r,S.F.-sf
Carey, Thomas Sheridan	Los Angeles	Phyl.-Med. 119	Union
Carl, Vera Luella	Gilroy	Ed.-G. A. 14	21 Roble
Carlisle, Charles F.	Chicago, Ill.	Econ. 12	Sigma Alpha Ep.
[1]Carlson, Howard	Butte, Mont.	Econ. 11	634 Hamilton-p
Carlyle, Claire Howard	San Martin	Econ. 33	401 Encina
[1]Carney, Mary F. A. B., Stanford, 1917.	Springdale, Mont.	Hist. 122	Delta Gamma
Carr, John Edwin	Porterville	PreL. 17	9 Cabrillo
[1]Carroll, Daniel Brendan	Sydney, Aust.	Geol. 88	Sigma Alpha Ep.
Carroll, Frederic H.	El Paso, Tex.	Econ. sp. 88	Sigma Chi
Carter, Jessie Marie	Pasadena	Zool. 69	Sigma Kappa
Carter, Philip Staats	Glastonbury,Conn.	M. E. 104	Alvarado Club
[1]Carter, Rae Best	Modesto	Law 70	301 Encina
Carus, Clayton Douglas A. B., Stanford, 1913.	Palo Alto	Hist. gr.	325 Guinda-p
Carver, Ralph Langhenry	Los Angeles	PreL. 13	Delta Upsilon
Cash, Harold C.	Chattanooga, Tenn.	Phil. 79	Theta Delta Chi
Cass, Donald A. B., Stanford, 1914.	South Pasadena	Med.gr.	2446Wash.,S.F.-sf
Cass, Harold Pliny	South Pasadena	Bot. 8	Zeta Psi
Cass, Quincy A. B., Stanford, 1916.	South Pasadena	Law gr.	Zeta Psi
Cassady, Lloyd Herbert	Whiting, Ia.	Law 68	Sigma Nu
Cassingham, Carl C. A. B., William Jewell, 1913.	Bosworth, Mo.	Educ. gr.	347 Alma-p
[1]Cathcart, Franklin D., Jr.	Palo Alto	Econ. †28	434 Waverley-p

Cattell, Anna Ashburner	Palo Alto	Hist. 79	509 Hale-p
Cattern, Newton E.	South Pasadena	Econ. 11	Delta Kappa Ep.
[1]Caughell, Vernon Eldridge	Fresno	Phyl. 35	443 Encina
Caughey, Edgar Reginald	Ukiah	Law 66	122 Encina
Cavins, Wilhelmina Victoria	SantaAna	Math. 79	25 Madrono
Cecil, Harlan Edward	Modesto	PreL. 36	232 Encina
Chambers, George Robert, Jr.	Oakland	Econ. 46	132 Encina
Chambers, William Copeland	Lakeside	PreL. 30	County Road
Chandler, Constance	Los Angeles	Engl. 68	Alpha Omicron Pi
[2]Chandler, Fitz-Mac	Los Angeles	Econ.	70 Encina
Chandler, Henry Arwin	San Diego	Geol. 45	Phi Delta Theta
Chandler, Loren Roscoe	Fresno	Phyl. 77	Zeta Psi
Chandler, Ruth	Los Angeles	Hist. 41	Alpha Omicron Pi
Chapman, Charles McD.	Santa Rosa	Hist. 59	445 Encina
Chapman, Earl B.	Clarkston, Wash.	PreL. 11	Delta Chi
Chapman, Herbert Samuel	Clayton	Med. gr.	2403 Calif., S.F.-sf
A. B., Stanford, 1914.			
Chapman, Lawrence L.	Santa Rosa	Hist. 69	Guild Hospital
Chapman, Sherwood	San Francisco	Engl. 116	21 Salvatierra
Chappelear, Monroe	Palo Alto	M. E. 16	451 Addison-p
[1]Chappell, Delos Allen	Denver, Colo.	Econ. †3	Sigma Alpha Ep.
Chase, Frank Forrester	Los Angeles	Law 71	Sigma Alpha Ep.
[1]Childress, Henry Harrison	San Mateo	PreL. 23	2 Salvatierra
Chiles, Chester Arthur	Palo Alto	Educ. 105	347 Alma-p
Choate, Nellita Naomi	Los Angeles	Engl. 109	KappaKappaGam.
[1]Christensen,EarnestStephen	Pasadena	Chem.100	AlphaTauOmega
Christiansen,Elizabeth B.	SanFrancisco	Med. gr.	2059 Bush, S.F.-sf
A. B., California, 1915.			
von Christierson, Sigurd	San Jose	Phyl.-Med. 102	331 Encina
Church, Dell Vivian	San Jose	Hist. 12	279 N. 13th, S.J.-sj
Churchill, Owen Porter	Los Angeles	Hist. 18	1121 Bryant-p
[1]Clark, Charley Francis	Vinton, Ia.	Chem. 124	430 Forest-p
A. B., Stanford, 1917.			
[2]Clark, Cora Bowen	Los Angeles	Hist. 78	Alpha Phi
Clark, Daniel Mabee	Scranton, Pa.	Econ. 91	505 Encina
Clark, Darrel Grant	Ogden, Utah	Phyl. 10	Phi Gamma Delta
Clark, Donald Francis	Stanford Univ.	Econ. 83	449 Encina
[1]Clark, Douglas	Grass Valley	Latin gr.	Nordyne Apts.-p
A. B., Stanford, 1911.			
Clark, Ellen Eveline	Pasadena	Math. 45	Gamma Phi Beta
Clark, Frances Naomi	San Jose	Zool. 78	64 Roble

Clark, George Harold	Ida Grove, Ia.	Law 62	Alpha Delta Phi
Clark, Helen Virginia	Stanford Univ.	Fr. 83	7 Alvarado
Clark, Laura Cornelia	San Jose	Math. gr.	64 Roble
A. B., Stanford, 1915, A. M., 1916.			
[1]Clark, Lester Lyon	Stockton	Phyl. 36	Sigma Alpha Ep.
[1]Clarke, Frank Joseph	San Francisco	PreL.	1182Guerrero,S.F.-sf
Clattenburg, Herbert A.	Eureka	Med. gr.	2102 Calif.,S.F.-sf
A. B., Stanford, 1915.			
Claussen, Thomas Hibben	Sausalito	C. E. 114	562 Encina
Clifford, Mildred Elsie	Burlingame	Ent. 111	Delta Delta Delta
Clift, Grace Seybert	San Francisco	Span. 10	1 Madrono
Cluff, Geraldine Marion	Reno, Nev.	Hist. 71	Kap. Alpha Theta
Cochrane, William Roy	San Francisco	PreL. 47	Zeta Psi
Cody, Mervyn Joseph	San Francisco	E. E. gr.	Alpha Delta Phi
A. B., Stanford, 1917.			
[1]Coe, Wilbur Franklin	Roswell, N. M.	Law 120	Redwood City
A. B., Stanford, 1917.			
[2]Coffin, Thelma Ruth	Reno, Nev.	Hist. †	Delta Delta Delta
Cogswell, Elinor V.	KlamathFalls,Ore.	Engl. gr.	640 Waverley-p
A. B., Stanford, 1916.			
Cohen, Aaron Norman	Portland, Ore.	PreL. sp. 14	11 Salvatierra
Coil, Marjorie Kathryn	Woodland	Engl. 38	Alpha Omicron Pi
Coleman, Alfred H., Jr.	Tacoma,Wash.	Geol. 66	Delta Upsilon
Coleman, Richard R., Jr.	Los Angeles	PreL. 81	Delta Kappa Ep.
Colglazier, Flavis Karl	Tucson, Ariz.	Econ. 10	AlphaTauOmega
Collins, Gaylord Carter	Fairfield, Ia.	Econ. 107	Chi Psi
Collins, Nelson Ernest	Knights Ferry	C. E. sp. 76	El Camino
Collins, Walter W.	Dawson,Y.T., Can.	M. E. 51	227 Encina
Colombet, Anita Barbara	San Jose	Econ.111	KappaKappaGam.
Coman, James Lindley	Alhambra, Ariz.	Chem. 72	Theta Xi
[1]Combs, Arthur Banning	Monrovia	M. E. sp. 3	Encina
Combs, William Hooper	Los Angeles	PreL. †15	Beta Theta Pi
Compton, Anita Margaret	Palo Alto	Ed.-G.A. 12	437 Bryant-p
Conard, Fidelia Elizabeth	San Diego	Fr. 15	Pi Beta Phi
Conard, Horace Milton	San Diego	Econ. 82	Delta Chi
Condee, Newcomb	Los Angeles	PreL. 15	355 Encina
Connell, John Timon	Erie, Pa.	Bact. gr.	14 Alvarado
A. B., Michigan, 1916.			
[2]Connelly, Tristram Dollison	Palo Alto	PreL.	541 Cowper-p
Considine, John W., Jr.	Seattle, Wash.	Phyl. 10	1121 Bryant-p
Cook, Charles Franklin	Long Beach	Law gr.	133 Encina
A. B., Stanford, 1916.			

Cook, Clyde Swift	San Jose	Econ. 54	247 Encina
Cooley, Philip Harmachus	Santa Cruz	Hist. 76	861 Channing-p
Coonse, George K.	No. Yakima, Wash.	Phyl. 10	Delta Kappa Ep.
Cooper, Harold John	San Francisco	Phyl.-Med.107	323Hamilton
Cooper, John Alfred	Modesto	Med. gr.	2321Sacto.,S.F.-sf
A. B., Stanford, 1916.			
[2]Cooper, Ralph Waldo	Long Beach	Econ. †	Delta Kappa Ep.
Copley, Ralph David	Selma	Geol. 31	305 Encina
Coppes, Ward Eldon	Nappanee, Ind.	PreL. 39	718 Bryant-p
Corey, Pearl Johnson	Palo Alto	Span. 11	909 University-p
[2]Cornejo, Alfonso	Palo Alto	Chem. gr.	405 Kipling
University of Leipzig.			
Cottle, Katharine Elva	Los Angeles	Hist. 108	KappaAlphaTheta
Cottrell, Clifton Carlyle	San Jose	Econ. 58	Stanford Museum
Council, Clarence B.	South Pasadena	Law 66	Phi Gamma Delta
[2]Courchesne,CharlesAlbert	ElPaso,Tex.	M. E.	The Alexandria-p
Covey, Earl Leon	Napa	Hist. 13	Yard House
[2]Cowan, Charles S.	Sacramento	Phyl. sp. 24	408 Encina
Cowan, Clarence Bert	Fresno	Phyl. 46	Chi Psi
[1]Cowdrey, Mildred Gould	Palo Alto	Chem. 129	Alpha Om. Pi
A. B., Stanford, 1917.			
Cowgill, Frank Hubert	Pomona	Engl. 12	410 Lytton-p
Cowgill, George Raymond	Palo Alto	Phyl. gr.	410 Lytton-p
A. B., Stanford, 1916.			
Cowin, Clifford C.	Minneapolis, Minn.	Econ. 11	Chi Psi
[1]Coyle, James Daniel, Jr.	Sacramento	Phyl.-Med. †	706 Cowper-p
B. S., Santa Clara, 1916.			
[1]Coyle, True Franklin	Berea, Ky.	PreL. 30	317 High
[2]Crabtree, E. Katherine	Los Angeles	Ger. †	Madrono
Crabtree, Rebekah Taylor	San Diego	Ger. 72	Pi Beta Phi
Craig, James Gourlay	Long Beach	Law 66	Delta Chi
[2]Crandal, Jesse R.	Palo Alto	Educ. †	225 Homer-p
Crane, William W., Jr.	Oakland	Phyl.-Med. 106	Sigma Nu
Crawford, Alonzo Lawson	Palo Alto	PreL. 14	22 Encina
[1]Crawford, James Porter	Sunnyvale	Bact.gr.	Box16,Sunnyvale-s
A. B., Stanford, 1912.			
Crawford, Ronald F.	Hoquiam, Wash.	Geol. 14	409 Encina
Crim, Georgia Estelle	San Francisco	Hist. 123	Madrono
Crobaugh, Clyde Julian	San Jose	PreL.45	66Stockton,S.J.-sj
Crobaugh, Mervyn	San Jose	Econ.81	66Stockton,S.J.-sj
Crocker, Clarke Wilkins	Selma	C. E. 114	225 Encina

Crocker, Percy Summers	Selma	Geol. 75	225 Encina
Cronenwett, Fred McCall	Monrovia	Econ. 102	416 Encina
Crosby, Carlisle Cameron	Hayward	PreL. 47	Kappa Sigma
Cross, Helen Angeline	Merced	Engl. 76	KappaKappaGam.
Cross, Joseph Cameron	San Francisco	Engl. 118	Phi Delta Theta
Crouch, Kenneth Wilfred	Santa Ana	C. E. 9	Theta Xi
Crowe, Alice Mary	Long Beach	Engl. 15	4 Roble
Crowe, Harold Enos	Long Beach	Bact. 110	Alvarado Hall
Crowell, Clarence W.	Rochester, N. Y.	Chem. †28	Theta Delta Chi
Cullen, Thomas Joseph	Gilroy	Geol. 100	231 Encina
Culp, Crozier C.	Coeur d'Alene, Ida.	PreL. 43	401 Encina
Culp, Winifred	Escondido	Chem. 112	35 Roble
Cuneo, Irene Rose Lucile A. B., Stanford, 1915.	San Mateo	Educ. gr.	134Elm,S.M.-sm
[1]Cunningham, Burton L. B. S., Oregon Agricultural College, 1908.	Ashland, Ore.	Geol. gr.	435 Forest-p
Curler, Ben Vogel	Elko, Nev.	Law 110	Alpha Delta Phi
Curry, Clarence Pratt A. B., Amherst, 1909.	Portland, Ore.	Law gr.	4 Alvarado
Curry, Marjorie	Palo Alto	Engl. 66	Kap. Alpha Theta
[1]Curry, Mary Louise A. B., Stanford, 1915, A. M., 1916.	Palo Alto	Engl. gr.	Kap.Alpha Theta
Curtice, Aubrey A.	Spokane, Wash.	Geol. 46	Delta Upsilon
[1]Curtis, Wallace B.	Rochester, N. Y.	M. E. 108	357 Kingsley
Curtner, William W. A. B., Stanford, 1916.	Warm Springs	Zool gr.	Warm Springs-w
Cutler, Horace Willard	Pasadena	Law †18	El Camino
Cuttle, Kenneth Oborne	Riverside	Phil. †22	College Terrace
[1]Dachner,RichardH.	Eggesin,Pom.,Ger.	Econ. sp. 39	18 Alvarado
Daily, Wendell T.	Carpinteria	C. E. sp. 43	54 Encina
Dains, Ivores Roy	Redwood City	Law 80	221 Encina
Dalzell, William Campbell A. B., Stanford, 1912.	Omaha,Neb.	Law gr.	318 Emerson-p
[1]D'Ambrogio,NatalisJ.V. A. B., Stanford, 1917.	Flushing,N.Y.	Hist. 122	635 Bryant-p
Daniells, Alva A.	Lindsay	Econ. 46	Theta Xi
Daniels, Raymond E.	Los Angeles	Law 65	Delta Chi
[1]Darke, Frederick Eugene	San Jose	Law 55	195 Encina
Darling, Elma	Salt Lake City, Utah	Educ. 39	21 Madrono
Darrah, Guard Clement	Lodi	Law 71	62 Encina
[2]Darsie, Jean	Palo Alto	Phyl.	567 Melville-p

Davids, Mark	Los Angeles	Law 106	329 Encina
Davidson, Gordon MacM.	Los Angeles	M. E. 97	Alvarado Club
Davidson, Marian Kirk	Alhambra	Latin 75	Pi Beta Phi
Davis, Barber F.	Spokane, Wash.	Law 75	Alpha Delta Phi
[1]Davis, Benjamin F., Jr.	Woodland	Hist. 27	Phi Gamma Delta
Davis, Cachot Stephen	San Francisco	Econ. 15	Phi Kappa Psi
Davis, Eugene Lewyn	Santa Maria	Chem. 12	422 Encina
Davis, Francis R., Jr.	Hillsborough	PreL. 9	Phi Delta Theta
[1]Davis, Frank Audel	Santa Maria	Econ. 38	69 Encina
Davis, George Horace	Exeter	PreL. 8	4 Salvatierra
Davis, Gordon Arthur	Carmel	Engl. 66	Alpha Delta Phi
Davis, Herbert Adlington	Burley, Ida.	PreL. 15	310 High-p
Davis, Herbert Leslie	Westgate	PreL. 42	Sigma Nu
Davis, Lavoy Henry	Tonopah, Nev.	PreL. †23	114 Encina
Davis, Paul H.	Lindsay	M. E. 49	205 Encina
[2]Davis, Philip Du Mond	Los Angeles	Phyl. 39	712 Waverley
Davy, Donald Gordon A. B., Stanford, 1915.	San Jose	Med. gr.	2321 Sacto., S.F.-sf
[1]Dean, Marjorie Lewis A. B., Stanford, 1917.	Fairmont, Minn.	Latin 125	Delta Gamma
Debenham, Martin	San Francisco	M. E. 11	126 Encina
Decius, Harold Wesley	Los Angeles	Chem.-Med. 95	Zeta Psi
[1]Decius, Louis Courtney A. B., Stanford, 1914.	Los Angeles	Geol. gr.	707 Bryant-p
Degnan, John Paul A. B., Santa Clara, 1910, A. M., 1913.	Yosemite	Med. gr.	2428 Pine, S.F.-sf
Dehm, Bruce Edward	San Francisco	M. E. 6	220 Encina
[2]De Lancey, Chester Arthur A. B., California, 1916.	Oakland	Med. gr.	625 Syc., Oakland-o
De Mund, Herman Edwin	Los Angeles	Econ. 49	Alvarado Club
Denham, Charles M. A. B., Stanford, 1917.	Arroyo Grande	C. E. gr.	233 Encina
[1]Denhart, Harry John A. B., Stanford, 1917.	San Jose	PreL. 128	170 Encina
[1]Denhart, Helen Lucile A. B., Stanford, 1916.	San Jose	Phyl. gr.	330 S. 6th, S.J.-sj
Denison, Lyle M.	Deer Park, Wash.	Chem. 10	532 Homer
Dennie, Benjamin F.	Long Beach	C. E. 69	Kappa Alpha
Derby, Richard	San Francisco	Geol. 46	207 Encina
Desmond, Harold Francis	Los Angeles	Educ. 102	333 Waverley-p
[1]Dewey, Geraldine Dacia	Nampa, Ida.	Engl. 51	Alpha Phi

Dewing, Charles William	Oakland	C. E. 10	147 Encina
Dickey, Clarence Dudley, Jr.	Los Angeles	Phyl. †7	Zeta Psi
Dickey, Frank Fletcher	San Francisco	M. E. 99	Zeta Psi
Dickey, Henrietta Junkin	Westminster	Engl. 14	324 Emerson-p
Dickinson, William G.	Los Angeles	Law 73	Delta Tau Delta
Dickson, Virgil Everett	Los Altos	Educ. gr.	Los Altos
A. B., Washington State College, 1908.			
Dievendorff, Horton H.	San Diego	Geol. 100	Kappa Alpha
Dinapoli, Domenick	San Jose	M. E. 12	102Cypress,S.J.-sj
Dingley, Robert Gardner	Palo Alto	Law 80	575 Kellogg-p
[2]Dinkelspiel, Lloyd Wm.	San Francisco	PreL.	500 Encina
Dinsdale, Merle Vere	Woodland	Hist. 69	63 Roble
[1]Dixon, Harvey Francis	Point Arena	C. E. 5	1650 Waverley-p
Dixon, Robert James	San Jose	Phyl. 75	34Magnolia,S.J.-sj
Dobbings, Dorothy B.	Soldiers' Home	Hist. 45	63 Roble
Doble, John Ashton	San Francisco	M. E. sp. 75	Stanford Park
[2]Doble, Warren	San Francisco	M. E.	Stanford Park
Doble, William A., Jr.	San Francisco	M. E. sp. 42	Stanford Park
Dodds, Lauren Humphrey	Palo Alto	C. E. 29	667 Channing-p
[2]Doe, Charles Webster, Jr.	San Francisco	PreL.	Beta Theta Pi
Doebler, John H., Jr.	Los Angeles	Chem. 100	119 Encina
Dolan, Otis Dyer	Monrovia	Econ. 75	216 Encina
Dolbow, Vera Margaret	Palo Alto	Educ. 11	900 Waverley-p
Donaldson, Lorna Grace	Palo Alto	Engl. 102	737 Webster-p
Donaldson, Melvin S.	South Pasadena	Chem. †40	Theta Xi
Donaldson, Robert A.	Denver, Colo.	Engl. 102	237 Encina
Donnel, Harold G.	Rawlins, Wyo.	Engl. 52	244 Webster-p
Donovan, Mary Monica	San Jose	Med. gr.	33 19th Ave., S.F.-sf
A. B., Stanford, 1914.			
[1]Doolan, Jerome K.	San Francisco	C. E. †14	17 Salvatierra
Doolittle, Charles W.	Denver, Colo.	Phyl. 10	Sigma Chi
[1]Doron, Joseph Smith	Phoenix, Ariz.	Chem. 65	Theta Xi
Dorris, Edwin Drake	Phoenix, Ariz.	Phyl. 19	540 Encina
Dowdle, Joseph Edward	St. Louis, Mo.	Span. 49	515 Waverley-p
[1]Doyle, Francis P.	San Francisco	M. E. 1	18 Alvarado
[1]Draper, David Burris	San Jose	Phyl.-Med.†	822Wlw.,S.J.-sj
A. B., Santa Clara, 1916.			
Draper, Guy	Arroyo Grande	Chem. 37	303 Encina
Draper, Roscal Leroy	Arroyo Grande	Med. gr.	1939 Clay, S.F.-sf
A. B., Stanford, 1913.			
[1]Dreese, D. Dayton	Akron, O.	PreL. 36	Hamilton ave.

Driscoll, Dorothy Catherine	Pasadena	Engl. 10	KappaKappaGam.
Driscoll, John G., Jr.	San Luis Obispo	PreL. 55	375LittleKingsley
Driver, Herschel L.	Portland, Ore.	Geol. 83	Theta Xi
Driver, Robert Sample	Sacramento	PreL. 41	Theta Delta Chi
Drown, Marion Elizabeth	Nordhoff	Span. 110	Delta Gamma
Drury, Douglas R.	Victoria, B. C.	Phyl. †12	25 Encina
[2]Dubendorf, John Hayes	Palo Alto	M. E. 64	801 Waverley-p
Duddleson, William J.	East Ely, Nev.	Med. gr.	634 Hamilton
B. S., California, 1916.			
Dumpit, Jose O.	Banang, LaUnion, P.I.	Phyl. 30	14 Alvarado
[1]Duncan, Carl Dudley	Selma	Zool. 7	303 Hamilton-p
Duncan, Flora MacRae	Palo Alto	Greek 30	975 Hamilton-p
Duncan, Freeman David	Campbell	C. E. 78	Campbell-c
Duncan, John Atkinson	Yuba City	Med. †	2401 Sacto., S.F.-sf
[2]Duncan, Robert Fyfe Mein	Palo Alto	Geol.	975 Hamilton-p
Dungan, Donald Kembel	Denver, Colo.	M. E. 50	330 Encina
Dunlap, David Porter	Douglas, Ariz.	Law gr.	349 Encina
A. B., Stanford, 1916.			
Dunn, Chauncey H., Jr.	Sacramento	PreL. 45	PhiGammaDelta
Dunn, Herbert Iliff	Fresno	Law 67	Zeta Psi
Dunnell, Leo Cornelus	Cordelia	PreL. 37	306 Encina
Dunshee, Herva Consuelo	Palo Alto	Ed.-G.A.58	734Waverley-p
Durgin, Eva Lillian	Cupertino	Med. gr.	2186Calif.,S.F.-sf
A. B., Stanford, 1914.			
Durgin, Rubie Mae	Cupertino	Med. gr.	2186Calif.,S.F.-sf
A. B., Stanford, 1914.			
Duryea, Anne	Palo Alto	Engl. 72	308 Lincoln-p
Duryea, Philip Taylor	Palo Alto	Geol. 13	308 Lincoln-p
[2]Duryea, Robert Francis	San Francisco	C. E. gr.	1373 Clay, S. F.-sf
A. B., Stanford, 1913.			
Dyer, Thomas Lafayette	Alva, Okla.	Law gr.	35 Encina
A. B., Stanford, 1914.			
Dykeman, W. Jerome	Carmel, N. Y.	Econ. 51	538 Encina
Dykes, Harlan Hebe	Petaluma	Law 65	Alpha Tau Omega
Dysinger, Earl Scott	Fullerton	Econ. 105	824 Bryant-p
[1]Earl, Harley J.	Los Angeles	PreL. 43	Phi Delta Theta
[1]Eastman, Joseph Houston	Berkeley	Law 63	Sigma Chi
Eaton, Dorothy	Palo Alto	Phil. 77	431 University-p
Eberhart, Roland Fred	San Jose	Engl. gr.	246 Encina
A. B., Stanford, 1917.			
Eckhart, Charles W.	Los Angeles	Span. 60	125 Encina

Edgar, Hazel Beatrice	Imperial	Educ. 39	Delta Gamma
[1]Edmands, William H.	Upper Lake	C. E. †12	Phi Delta Theta
Edwards, Elizabeth	Palo Alto	Hist. gr.	707 Melville-p
A. B., Stanford, 1916.			
Edwards, Eunice Irene	Forsyth, Mont.	Econ. †24	38 Roble
Edwards, Helen Margery	Palo Alto	Zool. 99	627 Homer-p
Edwards, Mayowen	Berkeley	Engl. 106	Gamma Phi Beta
Egami, Hubert Eziro	Visalia	M. E. 12	Japanese Club
Egbert, Dorothy Barnes	San Francisco	Ent. gr.	Alpha Phi
A. B., Stanford, 1916.			
[1]Ehrenclou, Alfred H.	San Francisco	Med. gr.	LaneHosp.,S.F.-sf
A. B., Stanford, 1914.			
Eickhoff, Henry, Jr.	San Francisco	Law 64	Sigma Chi
Eiskamp, Ehler Henery	Palo Alto	Bact. 77	446 Forest-p
Eiskamp, Marguerite	Palo Alto	Ger. 29	446 Forest-p
Elden, Henry Frederick	Los Angeles	Econ. sp.	Alvarado Hall
Elden, John Francis, Jr.	Los Angeles	Law gr.	Alvarado Hall
A. B., Stanford, 1916.			
Eldredge, Lois	San Francisco	Engl. †43	80 Roble
Elliott, Daniel Walter	Garden Grove	Geol. 12	Theta Xi
Elliott, David Coit	Stanford Univ.	Econ. 79	5 Cabrillo
Elliott, Elizabeth	Pasadena	Engl. 13	10 Roble
Elliott, Jean	Prescott, Ariz.	Engl. 10	559 Kingsley-p
Ellis, Leland W.	East Bakersfield	Phyl.-Med. 107	446 Encina
Ellison, Phyllis Margaret	Woodland	Engl. 104	Pi Beta Phi
[1]Ellsworth, Thyrle Edmond	Mesa, Ariz.	Econ.	412 Cowper-p
Elmer, Erle Lewis	San Jose	Geol. 37	24th&Wm.,S.J.-sj
Elsey, Florence Starr	Palo Alto	Hist. 104	637 Gilman-p
[2]Elsey, George Wendell	Palo Alto	M. E. 124	637 Gilman
Elsey, Howard McKee	Palo Alto	Chem. gr.	734Middlefield-p
A. B., Stanford, 1914, A. M., 1915.			
Elsinger, Ruth Maxine	Glendora	Greek 13	Madrono Annex
[2]Elvey, Donald Mitchell	Cupertino	Econ.	Cupertino-c
Emerson, Ethel Eunice	Mountain View	Educ. 99	33 Roble
Emery, Allen Lee	Portland, Ore.	Law 94	Phi Kappa Psi
Endres, Herbert Arthur	Los Angeles	Chem. 44	406 Encina
Engels, Emil Edward	Seattle, Wash.	Law 95	221 Encina
English, Floyd Everett	Cupertino	Law 107	208 Encina
Enke, Melinda	Portland, Ore.	Lat. gr.	Delta Gamma
A. B., Stanford, 1916.			
Epperly, Albert Marion	Lebanon, Ore.	Econ. †21	405 Emerson-p

Eppich, Elinor Marie	Denver, Colo.	Engl. 47	65 Roble
Erich, Ezra Edward	San Jose	Geol. 66	146 Encina
Erickson, Arthur Samuel	Los Altos	Hist. 74	Los Altos-l
Esgen, Wienand Kelly	Los Angeles	M. E. 9	Alpha Tau Omega
Estcourt, Doris Elfrida	Berkeley	Engl. 106	55 Roble
[1]Estcourt, Vivian Fitz-George	Berkeley	M. E. 71	350 Encina
Estes, Carlton C.	Longmont, Colo.	Hist. 44	Sigma Nu
[1]Estes, Ruth Jeanette	Los Angeles	Hist. †	Pi Beta Phi
Eubank, Grace Elizabeth	Wilmington	Engl. 77	KappaKappaGam.
Eubanks, Ruth Marie	Alameda	Span. 13	30 Madrono
Evans, Daniel Webster	San Bernardino	PreL. 13	302 Encina
Evans, Margaret Reese	Palo Alto	Zool. 102	Delta Gamma
Evans, Samuel, Jr.	Oak Park, Ill.	M. E. 44	AlphaTauOmega
[1]Evans, Samuel Anthony	San Diego	C. E. †29	263 Churchill
Evenson, Franklin F.	Clatskanie, Ore.	M. E. 51	544 Encina
Evenson, Willard T.	Clatskanie, Ore.	Law 122	544 Encina
Eyer, Clarendon B., Jr.	Los Angeles	Chem. 12	Phi Gamma Delta
Eyer, William Knowlton	Los Angeles	Econ. 100	Phi Gamma Delta
Fabling, Florence Maud	Denver, Colo.	Hist. 10	Gamma Phi Beta
Fabling, Harry Creed	Denver, Colo.	C. E. 122	Alvarado Hall
Faitoute, Alice Everts	Visalia	Hist. 9	30 Roble
[1]Faitoute, Florence Benedict A. B., Stanford, 1916.	Visalia	Engl. gr.	43 Roble
[1]Falk, Theodore	Boise, Ida.	Law 66	88 Encina
Fancher, Charles Rousseau	Modesto	Phyl.-Med. 103	444 Encina
Faries, Culbert William A. B., Stanford, 1916.	Los Angeles	C. E. gr.	32 Encina
[2]Farnsworth, George Willis	Porterville	Econ.	357 Encina
Farrell, Amy L. A. B., Stanford, 1916.	Salt Lake City, Utah	Fr. gr.	40 Roble
Farrell, Raymond	New York, N. Y.	Law 92	1800 Forest Ct.
Farris, Fauna Wynne	Palo Alto	Engl. sp. 134	315 Everett-p
Fast, Lisette Emery	Silverton, Colo.	Engl. 53	32 Roble
Fearing, Franklin S.	Seattle, Wash.	Psych. sp. 15	545 Forest-p
Fearney, Mary Elizabeth	Los Angeles	Engl. 104	8 Roble
[2]Febiger, Paul Carson	San Francisco	PreL. sp.	1106 Ramona-p
Felberbaum, William	Portland, Ore.	Phyl. sp. 69	446 Forest-p
[1]Felt, Tom Benjamin	Los Angeles	M. E. 57	El Camino
Fenlason, Clayton O.	Raymond, Wash.	PreL. 48	407 Encina
Ferguson, Donald Kelly	San Diego	Law 73	Phi Delta Theta
[2]Ferguson, Guy Hunter	Reidsville, N.C.	Engl. †	18 Alvarado

Ferris, Gordon Floyd A. B., Stanford, 1916.	Palo Alto	Ent. gr.	467 Melville
Fesler, Rachel	Duluth, Minn.	Hist. 79	545 Kingsley-p
Fesler, Ruth	Duluth, Minn.	Hist. 76	545 Kingsley-p
Field, Fred Seymour	Los Angeles	Law 80	Cooksey Lodge
Field, Frederic Charles	San Jose	Greek 11	523So. 6th,S.J.-sj
Field, Oliver C.	Ketchikan, Alaska	M. E. 112	AlphaTauOmega
Finch, George Britton	Chicago, Ill.	Econ. 41	Sigma Alpha Ep.
Finland, Elmer Victor	Victoria, B. C.	Econ. sp. 16	627 Gilman-p
Finley, Mark Hanna	Los Angeles	PreL. 13	Delta Kappa Ep.
Finney, Clara Eugenia A. B., Stanford, 1906.	Modesto	Med. gr.	2112Steiner,S.F.-sf
Finney, Mabel Consuelo A. B., Stanford, 1914.	Modesto	Med. gr.	2112Steiner,S.F.-sf
[2]Fischer, William Louis	Sutton, Neb.	Econ.sp.20	561Middlefield-p
Fisher, Albert B. A. B., Stanford, 1916.	Salt Lake City, Utah	Law gr.	Phi Kappa Psi
Fisher, Arthur W., Jr.	Los Angeles	C. E. 73	Kappa Alpha
Fisher, Carl A.	Salt Lake City, Utah	PreL. 37	Phi Kappa Psi
Fisher, Hazel Margreta A. B., Stanford, 1916.	Penryn	Ger. gr.	50 Roble
Fisher, Wilfred Balliet	Aurora, Ill.	Econ. 66	327 Hamilton-p
Fisk, Jackson	South Pasadena	PreL. 15	Kappa Sigma
[1]Flack, Augustus Sloan A. B., Stanford, 1915; J. D., 1917.	Los Angeles	Law gr.	Delta Chi
Flanders, Jesse K. A. B., Bates College, 1904.	San Francisco	Educ. gr.	799 Oak, S.F.-sf
[1]Fleming, Hortense Alexia	San Diego	Fr. 2	Alpha Omicron Pi
Fleming, James D.	San Bernardino	C. E. 77	Phi Gamma Delta
Fletcher, Hal B.	Palo Alto	Geol. 81	305 Hamilton
Flint, John Donovan A. B., Stanford, 1916.	Palo Alto	Law gr.	841 Bryant-p
Floete, Carl Elmore	Chicago, Ill.	Econ. 39	Delta Kappa Ep.
Flood, Randolph G.	San Francisco	Chem. 71	Phi Delta Theta
Flood, Thomas B.	Tonopah, Nev.	C. E. 93	309 Encina
[2]Flowers, Mary La Belle	Monrovia	Engl. 56	Kap. Alpha Theta
Ford, Edward Morris	Los Angeles	Law 72	Alpha Tau Omega
Ford, Horace Elmer	Fullerton	Hist. 75	824 Bryant-p
Ford, Nell Elizabeth A. B., Stanford, 1910, A. M., 1911.	Oakland	Med. gr.	2321Sacto.,S.F.-sf
[1]Foster, Clarendon, Jr.	Pacific Grove	PreL.	Sigma Nu

Foster, J. Bryan	Clarinda, Ia.	Phys. 33	235 Encina
Foster, Parker Voorhees	Los Angeles	PreL. 57	Phi Delta Theta
Foster, Sue Anne	Palo Alto	Ger. 7	381 Lincoln-p
Fout, Edmond Eugene	Palo Alto	Hist. 103	1021 Cowper-p
Fowler, John Shively	Redwood City	Geol. 61	434 Encina
[2]Foy Mark	Sydney, N. S. W.	C. E.	403 Alma
Frankenfield, Lorraine	Los Angeles	Econ. 42	73 Roble
[2]Frankenheimer, Bernice	Stockton	Engl. †	Madrono Annex
Franklin, Anna Comstock	Palo Alto	Phyl. 12	1057 Ramona-p
Franklin, Lyman Trumbull	San Jose	Econ. 42	375N.14th,S.J.-sj
[2]Frantz, Harry Warner	Riverbank	Econ. 57	Alvarado Hall
[2]Freeman, Henry A.	Central Point, Ore.	PreL. 39	147 Encina
Freeman, Joseph William	Santa Maria	Hist. 6	248 Encina
Frey, Earle William	Placerville	M. E. 125	301 Encina
[2]Frickelton, Jean Scott	Palo Alto	Engl.	912 Waverley-p
Fritsch, Rudolf Hermann	Palo Alto	Econ. 81	831 Kipling-p
Fritzschen, H. Wilhelm	San Francisco	Phyl. sp. 15	TheAlexand.-p
Frye, Henry Abraham	Berkeley	Econ. 107	235 Encina
Fukumoto, Juno	San Jose	C. E. †7	718 Emerson-p
[2]Fullerton, Edith Ralston	San Mateo	Hist.	311 Laurel, S. M.-sm
Fundenberg, William C.	Pasadena	PreL. 39	130 Encina
Furui, Shungo	Selma	M. E. 14	Japanese Club
Fybush, Irma Theodora	Los Angeles	Ger. 76	14 Roble
[2]Fyfe, Florence Marjorie	Winnetka, Ill.	Math. gr.	Madrono Annex
A. B., Bryn Mawr, 1915.			
Gaffney, John Wyman	Los Angeles	Econ. †14	Stanford Union
[1]Gaffney, Russell Alger	Alma, Mich.	Law †	219 Ramona-p
Gage, Edmund Vernon	Palo Alto	Fr. gr.	230 Kellogg-p
A. B., Harvard, 1899; A. M., Pennsylvania State College, 1908.			
Gagos, Kurken M.	Fresno	M. E. 91	567 Melville-p
Gailfus, Lorna Margaret	Modesto	Lat. 74	Pi Beta Phi
Gallegos, Percy Beales	Palo Alto	Phyl. 11	564 University-p
Galliano, Frank James	Oakland	Law 68	362 Encina
[2]Galloway, Hugh Carnegie	Los Angeles	Chem.	Zeta Psi
Galpin, Ellen Tupper	Eagle Rock	Bot. gr.	Alpha Phi
A. B., Stanford, 1917.			
Gangestad, Roy Sylvester	Los Angeles	Law 74	Delta Kappa Ep.
[1]*Ganong, Holt W.	Portland, Ore.	M. E.	Sigma Alpha Ep.
Gansert, William Iles	Rock Island, Ill.	Law 74	18 Alvarado

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* Deceased, September 19, 1916.

Gardiner, Lucius Dean	Long Beach	Law 76	Delta Chi
[1]Gardner, John Henry	Pacific Grove	Econ. 5	Sigma Nu
Gardner, Laurence Dickinson	Ventura	Chem. 112	307 Encina
Garfias, Valentine Richard	Palo Alto	M. E. gr.	634 Hamilton
A. B., Stanford, 1907, A. M., 1912.			
Garland, Ruth	Nordhoff	Bact. 7	Delta Gamma
Garliepp, William Louis	Mtn. View	Ent. 73	MountainView-mv
Garrett, Robert Harmon	Cleveland, O.	Econ. 34	Chi Psi
[1]Garrison, Ridgley Raymond	Ceres	Engl. 9	712 Bryant-p
Garsed, Gwendolen H.	Palo Alto	Engl. 77	336 Everett-p
Garvin, Lenell Ethlyn	Los Angeles	Lat. 32	Alpha Omicron Pi
Garwood, Alda Ann	Mayfield	Econ. gr.	Mayfield-m
A. B., Stanford, 1917.			
Gavin, Dorothy Elizabeth	San Diego	Engl. 16	Pi Beta Phi
Gazlay, Frank Andrews	San Diego	Law 92	Kappa Alpha
Geistweit, William H., Jr.	San Diego	Med.	2253 Webster, S.F.-sf
A. B., Redlands, 1915.			
Gentry, Ira Howard	Cottonwood, Ida.	PreL. 42	606 Encina
[2]von Geldern, Hans	San Francisco	Med.gr.	1724B'dway,S.F.-sf
A. B., California, 1916.			
George, Arthur Tolover	San Jose	Econ. 13	Menlo Heights
Gerken, Elon Edward	Morgan Hill	PreL. 13	627 Bryant-p
German, Wallace Alvin	Ukiah	Chem. 10	353 Encina
[1]Gerwin, Adanell L.	Redwood City	Ed.-G.A.26	114Brwstr,Red-r
Ghrist, David Garrison	Ames, Ia.	PreL. 17	Beta Theta Pi
Ghrist, Orrie E.	Ames, Ia.	Phyl.Med.109	BetaThetaPi
Gibbs, Chester William	Orcutt	Chem. 12	422 Encina
Gibbs, Doris Jean	Pasadena	Engl. 45	KappaKappaGam.
[1]Gibson, Florian Greenleaf	Palo Alto	Geol. 19	833 Hamilton-p
Gibson, William H.	Salt Lake City, Utah	Econ. 80	Phi Kappa Sigma
Gifford, Myrnie Ada	Randolph, Vt.	Med. gr.	1040Bush,S.F.-sf
A. B., Mt. Holyoke, 1915.			
Gifford, Richard A.	Durango, Colo.	M. E. 13	151 Encina
Gilbert, Katherine	Long Beach	Educ. 30	57 Roble
Gilbert, Marion	Montrose, Colo.	Hist. 76	Alpha Omicron Pi
Gilbert, Rea	Montrose, Colo.	Psych.102	AlphaOmicronPi
Gilbert, Warren K.	Montrose, Colo.	PreL. 15	Delta Upsilon
Gilchriste, Aida Christine	San Mateo	Engl. 56	105Tilton,S.M.-sm
Gillespie, Bartlett W.	Santa Maria	M. E. 73	417 Encina
Gillett, Lorenzo Rowe	Sterling, Colo.	Econ. 81	18 Alvarado
[1]Gillies, Don	Alhambra	Phyl. 60	143 Encina

Gilliland, Otho James A. B., Stanford, 1916.	Altoona, Pa.	Ent. gr.	Campus School
Gilman, Maud Ruth A. B., College of Pacific, 1916.	San Jose	Math. gr.	6 Roble
Gilroy, William	Santa Monica	Law 97	Chi Psi
Gladstone, Dwight B.	Palo Alto	M. E. 112	603 Waverley-p
[1]Gleeson, Thelma Clare A. B., California, 1916.	San Francisco	Econ. gr.	Madrono
Glen, Hugh Harold	Portland, Ore.	Econ. 11	Sigma Chi
Glikbarg, Abner Sam	Oakland	PreL. 35	120 Encina
[1]Goetjen, Floyd L.	Dawson, Y. T., Can.	PreL. 50	18 Alvarado
Goldberg, Edward	Washington, D. C.	Educ. 110	126 Encina
Goldsmith, Arthur A. A. B., Stanford, 1916.	Los Angeles	Law gr.	329 Encina
Goldstein, Joseph	Sacramento	Bact. 80	448 Encina
Goldstein, Matt	Sacramento	PreL. 47	427 Encina
Gonzaga, Jose C.	Rio De Janeiro, Brazil	C. E. 75	559 Cowper-p
[1]Gonzales, Francisco Leopoldo	San Jose	Phyl. 44	520 Harrison, S.J.
Gonzalez, Carlos A.	Diriamba, Nic., C.A.	Geol. 69	635 Bryant-p
Goodman, Byron M.	Forest Grove, Ore.	C. E. †16	24 Encina
[2]Goodwin, Paul McCully	Riverside	Chem. 102	Theta Xi
Goold, John Vernon	Morgan Hill	Phyl. 12	627 Bryant-p
Gores, Walter W. J.	Los Angeles	Ed.-G. A. 104	224 Encina
Goss, Hazel Stevenson A. B., Stanford, 1914.	Denver, Colo.	Math. gr.	52 Roble
Graham, Alden Gerard	Portland, Ore.	PreL. 13	Zeta Psi
Graham, Chalmers George	Palo Alto	Law 97	1118 Emerson-p
Graham, Granville Eugene	Moorpark	Phyl. 13	505 S. 7th, S. J.-sj
Graham, Lloyd Edgar	Sacramento	M. E. 48	51 Encina
[2]Graham, Ruth	Los Angeles	Lat. †	48 Roble
Grant, Adele Lewis B. S., California, 1902.	Columbia	Bot. gr.	Madrono Annex
Graveley, Martha	Boise, Ida.	Fr. 53	Delta Delta Delta
Gravem, Harold Larsen	Stockton	PreL. 14	Sigma Alpha Ep.
Graves, John Maddux A. B., Stanford, 1916.	San Francisco	Med. gr.	34 Hill, S.F.-sf
Gray, Donald Burr	Richmond	PreL. 7	553 Encina
Gray, George Donald	Pueblo, Colo.	Fr. 72	586 Encina
Gray, John	Palo Alto	Bot. 108	405 Emerson-p
[2]Green, Faith Amy	Pasadena	Hist. †13	6 Roble
Green, Gladys	Redlands	Engl. 79	2 Madrono

[1]Green, Glen Dollard	Madera	Engl. 70	Delta Chi
Greene, Clark D.	New London, Conn.	Econ. 9	620 Waverley-p
Greene, Claudia L.	Salt Lake City,Utah	Zool. †33	Sigma Kappa
Greening, Helen Kathleen	Los Angeles	Lat. 100	Delta Delta Delta
[1]Greenleaf, Lucile	Santa Barbara	Eng. †7	Madrono
Greer, Margaret	San Jose	Math. 43	334 Homer-p
Greis, Arnold John	Los Angeles	PreL. 13	131 Encina
Greve, Frank Henry	Los Angeles	PreL. 33	Phi Delta Theta
Griffin, Albert Devereaux	Los Angeles	C. E. gr.	324 Encina
A. B., Stanford, 1917.			
Griffin, Raymond Rudolph	Salinas	Law 101	Delta Chi
Griffin, Robert Allen	Santa Monica	Phil. 93	16 Salvatierra
Grimes, Ruth Elizabeth	Florence, Ariz.	Math. gr.	28 Madrono
B. S., Parsons College, 1914.			
Grimshaw, Margaret	Corcoran	Fr. 11	57 Roble
Griswold, Hugh Harris	Modesto	PreL. 16	248 Encina
[1]Griswold,Jos.W.	ShelburneFalls,Mass.	M. E. 23	403 Alma-p
Grosfield, Helen Isabel	Los Angeles	Greek 72	Delta Gamma
[2]Grounds, Ray G.	Independence, Ore.	Econ.	352 Encina
[1]Grove, Ruth Frisbie	Palo Alto	Phyl. 22	363 Melville-p
[2]Grover, Dana Irving	Milwaukee, Wis.	Hist. gr.	704 Waverley-p
A. B., Wisconsin, 1902.			
Gruner, Meta Bertch	St. Louis, Mo.	Ger. gr.	319 Addison-p
A. B., Washington (St. Louis), 1910.			
Gruner, Vera Gilda	St. Louis, Mo.	Ger. 10	319 Addison-p
Guild, Frank Nelson	Tucson, Ariz.	Geol. gr.	19 Salvatierra
B. S., Vermont, 1894, A. M., 1903.			
Guild, Marilla Merriman,	Tucson, Ariz.	Engl. gr.	19 Salvatierra
A. B., Arizona, 1916.			
Gunn, Milton Curtiss	Helena, Mont.	Law 118	Phi Kappa Sigma
Gunn, William	Berkeley	Econ. 8	11 Salvatierra
[2]Hackett,RusselGraham	Spokane,Wash.	C. E.	11 Salvatierra
Hadden, Fannie	Palo Alto	Chem. 109	531 Cowper-p
Hafer, Joseph Bursk	San Diego	Law 64	Delta Chi
Haffner, Georgia	Venice	Econ. gr.	Gamma Phi Beta
A. B., Stanford, 1916.			
Hahn, Herbert Leonard	Pasadena	Law 122	438 Encina
Haig, Raymond Thomas	San Jose	Phyl. 74	526 Encina
Haines, Wilbur Heath	Oakland	Geol. 54	Theta Delta Chi
Haist, Helen Eugenia	Lemoore	Ger. 4	3 Madrono
Hake, Benjamin F.	Worland, Wyo.	Geol. 80	203 Encina

[2]Hale, Robert Ira	Burley, Ida.	M. E.	310 High-p
Hale, Ruby Virginia	San Francisco	Engl. 48	KappaAlphaTheta
Hales, Walter H.	Anchorage, Alaska	M. E. 13	118 Encina
Hall, Clarence R.	Mt. Vernon, Wash.	Chem. 76	130 Encina
Hall, George William	Pasadena	Chem. 34	Alpha Delta Phi
[1]Hall, Herbert Russell	Palo Alto	Econ. 12	256 Kellogg-p
Hall, James Hinquong	Canton, China	Chem. 47	421 1st., S.M.-sm
Hall, Jean Ethel	Los Angeles	Math. 77	Pi Beta Phi
Hall, Lawrence Chalmers	Riverside	Econ. 6	251 Encina
Hall, Lucy Alice	Palo Alto	Fr. 107	346 Waverley-p
Hall, Myron Crawford	Palo Alto	Engl. 75	346 Waverley-p
[1]Hall, Spencer	San Jose	M. E. 23	Delta Tau Delta
Hall, Winslow Gladwin	San Mateo	C.E. 50	165Warren,S.M.-sm
Hallmeyer,CarmenGertrude	SantaClara	Law 9	Madrono Annex
Halsted, Samuel Thompson A. B., Stanford, 1917.	Riverside	C. E. gr.	Beta Theta Pi
Ham, Allen Martin A. B., College of Pacific, 1916.	Ceres	Hist. gr.	Phi Kappa Psi
Hamilton, Alice	Palo Alto	Hist. 10	1200 Emerson-p
Hamlin, Harris Howard	Los Angeles	PreL. 40	449 Encina
Hamlyn, Geraldine Mary	Marysville	Hist. 106	Pi Beta Phi
Hammett, Harry Rice	Redlands	M. E. 113	520 Encina
[1]Hammon, Glen A.	San Francisco	Math. 62	Phi Delta Theta
Hammond, George R.	Westlake, Ore.	M. E. 75	206 Encina
Hampton, Fred George	Hardwick	M. E. 143	313 Kipling-p
Hancock, Beatrice Margaret	Riverside	Hist. 93	Delta Gamma
Hand, Arlene Zweifel	Hillyard, Wash.	Lat. 12	62 Roble
Hanf, Hobart Whittier	San Bernardino	M. E. 52	Theta Xi
Hanna, Dorothy Edwina	Los Angeles	Hist. 46	KappaKappaGam.
Hanna, Marie Mildred A. B., Bellevue College, 1913.	Auburn, Neb.	Lat. gr.	Madrono Annex
Hanna, Maynard Basil	Fresno	Law sp. 119	420 Encina
[1]Hanna, Murel Warmoth	San Francisco	Econ. †	Delta Delta Delta
Hansen, Hazel Dorothy	San Mateo	Lat. 10	402 Tilton, S.M.-sm
[2]Hansen, Lorenz Max	Oakland	PreL.	Delta Tau Delta
[2]Hansen, Mabel Marguerite	San Mateo	Ed.-G.A.	402Tilton,S.M.-sm
[1]Hardies, Elmer E.	Los Gatos	Econ.	Sigma Alpha Ep.
Hargrove, Stone L.	Pittsburg, Tex.	Engl. 75	119 Encina
[1]Harper, Earle Ramond	Los Angeles	Law 26	359 Encina
Harper, Edward B.	East Newport	PreL. 15	359 Encina
[2]Harper, William Alexander	Santa Cruz	Econ. 34	Phi Kappa Sigma

Harrington, Donald S.	Leetonia, O.	Econ. 50	201 Encina
Harrington, Edward W.	San Rafael	Hist. 78	334 Lincoln-p
Harris, Benjamin Arthur	Menlo Park	PreL. 40	Menlo Park-m
Harris, Hugh Emison	Princeton, Ind.	Econ. 103	Phi Kappa Psi
Harris, Melville David	Modesto	Econ. 45	120 Encina
Harris, Ronald Biddle	Fresno	Law 92	Chi Psi
Harrison, George Russell	Halcyon	Phys. 39	930 Scott-p
[2]Hart, Bess Frances	So. Pasadena	Econ. †	Roble
Hart, Lynn Newton	Berkeley	Med. †	942Potrero,S.F.-sf
Hartman, Barnard W.	Spencer, Ia.	PreL. 14	Encina
Hartman, Richard Homer	Spencer, Ia.	PreL. 14	Encina
Hartshorn,Llewellyn P.	Hoquiam,Wash.	Chem. 38	510 Encina
Hartsoc, Francis Maurice	Oakdale	PreL. 8	The Alexandria
Hartwell, Hazel Louise	San Diego	Math. gr.	Alpha Om. Pi
A. B., Stanford, 1916.			
Harvey, Edith Isbell	Fresno	Econ. 100	Madrono
Harzfeld, Arthur J.	San Francisco	PreL. 10	124 Encina
Hashiba, George K.	San Francisco	Med. gr.	1811 Pine, S.F.-sf
A. B., Stanford, 1915.			
Haskell, Fessenden C.	San Bernardino	PreL. †13	11 Salvatierra
Hastings, Harlow H. A.,Jr.	Seattle,Wn.	Law gr.	Delta Kappa Ep.
A. B., Stanford, 1916.			
Hatch, Harold Elden	Akron, O.	Econ.45	446 Hamilton ave.-p
[1]Hatch, Raymond Ephraim	Modesto	Econ. 20	Delta Tau Delta
Hauser, Henry Paul	San Francisco	Econ. 72	336 Encina
Hawley, Donald Adams	Oakland	Law 100	Sigma Nu
Hawley, Henry James	Portland, Ore.	Geol. gr.	320 Encina
A. B., Stanford, 1916.			
Haxton, Wallace Raymond	Dexter, Ia.	Econ. 12	334 Emerson-p
Haydock, Evelyn Gladys	San Jose	Math. gr.	487 N. 5th,S.J.-sj
A. B., Stanford, 1916.			
[2]Hayes, Allan Sidney	Pasadena	Geol. 100	Zeta Psi
Hayes, Elystus Lyon	Edenvale	Law gr.	Phi Delta Theta
A. B., Stanford, 1916.			
Hayes, Eugene	Pasadena	Econ. 91	Alpha Tau Omega
Hayes, Harriet	Palo Alto	Engl. gr.	505 Homer-p
A. B., Stanford, 1912.			
Hayes, Percy Julian	Taft	Econ. 130	446 Encina
Hays, Samuel Ewing	Palo Alto	C. E. 9	412 Kipling-p
[2]Heath, Ronald Wayland	Palo Alto	Chem.	1147 Ramona-p
Heathcote, James Gerard	Hanford	M. E. 11	57 Encina

Hefflefinger, Orval Jewel	Tulare	Law gr.	222 Encina
A. B., Stanford, 1917.			
[2]Heintz, Ralph Morell	San Jose	Chem. 65	14 Encina
[2]Heller, Edward Hellman	San Francisco	PreL.	500 Encina
Helmick, Walter E.	Helena, Mont.	M. E. 65	246 Encina
Helsley, Gordon Frederick	Fresno	Med. gr.	2102 Calif., S.F.-sf
A. B., Stanford, 1915.			
[1]Henderson, Charles Edward	Piedmont	Econ. 15	Sigma Alpha Ep.
[2]Henderson, Edward	Santa Paula	Law gr.	337 Encina
A. B., Stanford, 1916.			
Henderson, Paul Leroy	Lucerne, Colo.	Chem. 10	Theta Delta Chi
Henn, Marion Mona	Oroville	Hist. 26	Pi Beta Phi
Henry, Kenneth Malcolm	Livermore	Chem. 70	404 Encina
[1]Henry, Merlin Leo	Palo Alto	C. E. 4	250 Cowper-p
Henry, William Howard	Los Angeles	PreL. †29	Zeta Psi
[1]Herdman, Ruth	Palo Alto	Span. 35	935 Cowper-p
[2]Herdman, Willis Arthur, Jr.	Los Angeles	Econ. †	Delta Kappa Ep.
Heron, Ivan Clyde	Watsonville	Phyl. 83	430 Encina
Hertel, Herbert Rudolph	Pasadena	Econ. 83	Zeta Psi
[2]Hess, Emma Beatrice	Burlingame	Math.†	1268 Cortez, Bgme.-b
Hess, Gordon Cumming	San Francisco	C. E. 56	526 Waverley-p
Heth, Henry Hardy	Montpelier, O.	PreL. 42	Alvarado Club
Hettinger, Albert John, Jr.	Fowler	Econ. gr.	Delta Kappa Ep.
A. B., Stanford, 1916.			
Hettinger, Eunice Walker	Fowler	Econ. 65	69 Roble
Hevener, Emilie M.	Sacramento	Math. 7	Alpha Phi
[2]Hevener, Ruth Clara	Sacramento	Bot. †	59 Roble
Hews, Hayden Lewis	Riverside	Law 108	323 Encina
Hickinbotham, John Cyrus	Stockton	PreL. sp. 8	Phi Gamma Delta
[1]Higgins, Robert Valentine	Santa Maria	Engl. gr.	421 Encina
A. B., Stanford, 1916.			
Hihn, Teresa Agnes	Santa Cruz	Econ. 19	Alpha Phi
[1]Hill, Julius C.	Bingham Canyon, Utah	PreL.	359 Emerson
Hill, Marion	Los Angeles	Math. 36	Kap. Alpha Theta
[1]Hillard, Robert Cushing	Palo Alto	Hist. †3	229 Byron-p
[1]Hills, Harry Sawyer	Oroville	Econ. 120	146 Encina
A. B., Stanford, 1917.			
Hills, William Leslie	San Francisco	M. E. 45	Theta Delta Chi
Hinchliffe, Margaret P.	San Francisco	Engl. 76	28 Roble
[1]Hinkey, Wilber A.	Boise, Ida.	Econ. 10	Alpha Delta Phi
Hinkle, Lucile Bernice	San Diego	Ed.-G. A. 107	4 Madrono

Hirst, Charles Harold	Douglas, Ariz.	M. E. 16	537 Encina
Hobbs, Charles Steinmetz	Fresno	Econ. 49	Sigma Nu
Hodapp, Cullom Sebastian	Oakland	Hist. 67	131 Encina
Hodges, George Charles A. B., Stanford, 1916.	Palo Alto	Hist. gr.	451 Channing
Hoever, August Joseph	Willows	C. E. 79	Theta Delta Chi
Hoffman, Hallock Egelston	Pasadena	Econ. 77	Delta Tau Delta
Holcomb, Clare	Boise, Ida.	Hist. 105	Sigma Kappa
Holland, John Connell	Roswell, N. M.	Law 117	420 Encina
Hollister, Ida G.	San Luis Obispo	Fr. 104	Kappa Kappa Gam.
[1]Holloway, Godfrey E. A. B., Stanford, 1917.	Helena, Mont.	Geol. 121	183 Encina
Holman, Frances	Palo Alto	Hist. 39	558 Lincoln-p
Holman, Ritter	Pacific Grove	Econ. †15	Phi Kappa Sigma
Holmes, M. Lyle	Hilo, Hawaii, T. H.	Econ. 109	18 Alvarado
Holmes, William H.	Roseburg, Ore.	C. E. 47	627 Homer-p
Holt, James Martin	El Centro	Econ. 48	Delta Tau Delta
[2]Holtham, Earl Albert	Modesto	PreL. 7	Phi Kappa Psi
[1]Honens, William H.	Calgary, Canada	Econ. 42	Alpha Tau Omega
Honey, John Kohnen	Gresham, Ore.	Econ. 77	18 Alvarado
Hood, Arthur James	Reno, Nev.	Phyl.-Med. †	667 Hamilton-p
Hood, Wilbur Kenneth	Portland, Ore.	Econ. 12	Palo Alto Hotel-p
[1]Hoover, Fenton Whitman	Portland, Ore.	C. E. †	108 Circle-p
Hopkins, Marjorie Chess	Pomona	Econ. †15	46 Roble
Hopwood, Helen Frances	Palo Alto	Hist. 38	847 Bryant-p
Hopwood, Margaret Bradfield A. B., Stanford, 1913.	Oakland	Educ. gr.	24 Roble
Horner, William F.	Honolulu, T. H.	Econ. 102	Sigma Chi
Horton, W. Ogden	Newcastle, Wyo.	Phyl. 51	Sigma Chi
Hoskins, Dorothy H.	Toronto, Can.	Engl. 33	475 Hamilton
Hoss, Herman Hubert	Corona	Law 71	27 Encina
Hough, Edward Stamford	Oakland	Hist. 67	Delta Tau Delta
Hough, Ethel Robb	N. Yakima, Wash.	Psych. 58	Kap. Alpha Theta
Hough, Walter Seneff	Ruffsdale, Pa.	Ent. 87	446 Hamilton-p
[2]House, Meredith J.	Riverside	Econ. 26	Beta Theta Pi
[1]Howard, Emily A. B., Vassar, 1916.	Stanford Univ.	Econ. gr.	Delta Gamma
Howard, Ernest Clyde	Ventura	C. E. 106	144 Encina
Howard, Graeme K.	Stanford Univ.	Econ. 104	Delta Tau Delta
Howard, Lowry Samuel	Mica, Wash.	Educ. 101	900 Waverley-p
Howard, Ward Davis	Graton	Phys. 12	271 Addison-p

Howe, Charles Dudgeon	Denver, Colo.	M. E. 51	426 Florence-p
Howes, Benjamin D.	Los Angeles	PreL. 6	Alpha Tau Omega
Howes, Laurence M.	Clinton, Ia.	Econ. 13	49 Encina
[1]Howes, Roy Francis	Palo Alto	Econ. gr.	219 Ramona-p
A. B., Clark, 1910; A. M., Stanford, 1912.			
[1]Hruska, Harold Howard	San Diego	PreL. 8	Alvarado Hall
[1]Hubbard, Adolph Herrmann	San Jose	C. E. 77	547 Encina
Hubbard, Charles	San Francisco	M. E. sp. 44	El Camino
[1]Hubbard, Gordon Alden	Palo Alto	C. E. 54	629 Forest-p
Hubbard, Ocheltree Seawell	Berkeley	Educ. gr.	50 Encina
B. L., California, 1913.			
Hubbs, Carl L.	Los Angeles	Zool. gr.	80 Encina
A. B., Stanford, 1916.			
[2]Hudner, Charles William	Hollister	PreL.	Delta Tau Delta
Huff, Frances Lucile	Palo Alto	Econ. 41	475 Melville-p
[1]Hull, Roswell Lee	Hollister	Phyl. 4	Alvarado Hall
[2]Humiston, Elizabeth	Long Beach	Educ. †	46 Roble
[1]Hummel, Donald Monroe	Oxnard	Chem. 2	18 Alvarado
Humphries, Florence Yost	Palo Alto	Engl. gr.	521 Everett-p
Ph. B., Cornell, 1888; A. M., Stanford, 1916.			
Humphries, John Hamilton	Palo Alto	Greek 13	521 Everett-p
Humphry, Eldon Eldred	Cupertino	C. E. 50	Cupertino-c
[2]Huneke, Elizabeth Christine	Los Angeles	Engl.	73 Roble
Hunt, William Rowsell	Elko, Nev.	Law 108	129 Encina
[2]Hunter, Charles Nelson	Burlingame	Econ.	Beta Theta Pi
Hunter, Clarence Lester	Redlands	Phyl. 98	Theta Delta Chi
Hunter, Iva Fern	Glendale	Hist. 60	635 Homer-p
Hunter, Kenneth Hume	Auburn, N. Y.	Geol. 14	Sigma Alpha Ep.
[1]Huntington, Frances	Palo Alto	Engl. gr.	516 Kingsley-p
A. B., Stanford, 1916.			
Huntington, Katharine	Palo Alto	Ger. 42	516 Kingsley-p
Huntsberger, Raymond W.	Los Angeles	Phyl. 43	Kappa Sigma
Hurley, Charles Clifton	Albion	Hist. 48	310 High-p
Hurley, Jere Elwood	Albion	Hist. 27	310 High-p
[1]Hussey, Horace Hadley	Faith, S. D.	Law †46	930 Scott
Hutchinson, Arthur J. L.	Palo Alto	Chem. 73	Phi Kappa Psi
Hutchinson, Arthur S.	San Francisco	Law sp. 62	955 Pine, S.F.-sf
Hyatt, Antonia	Sacramento	Chem. 79	Kap. Alpha Theta
Hyatt, Victor	Sacramento	Law 152	437 Encina
Hyer, Anna D.	Schofield Barracks, T.H.	Chem. 14	61 Roble
Ingels, Edna Esther	Fresno	Engl. 109	46 Roble

Iredell, Harry H.	Long Beach	M. E. 66	209 Encina
Irvine, James	Los Angeles	M. E. †71	Theta Xi
Irwin, Eugene Jerel	Berkeley	Educ. 72	448 Encina
[1]Ito, Charles	Palo Alto	Engl. 10	1101 Emerson-p
Ito, Ginya	Nagoya, Japan	Econ. gr.	Stanford Museum
Gr., Meiji University.			
[2]Jackson, Alfred John	Morgan Hill	Econ. 15	364 Encina
[1]Jackson, Bliss	Oakland	Law †	634 Hamilton-p
Jacoby, Lionel Arnold	Oroville	Phyl. 10	251 Emerson-p
Jacomini, Clement	Pasadena	Geol. 26	451 Encina
James, Arthur George	Palo Alto	M. E. 16	215 Churchill-p
James, Edith Mary	Riverside	Ger. 8	12 Madrono
Jameson, Bernice	Corona	Med.gr.	2401Sacto.,S.F.-sf
A. B., Stanford, 1915.			
Jameson, Carol Edna	Corona	Chem.-Med. 118	55 Roble
Jameson, Hetty Joy	Corona	Hist. 69	Delta Gamma
Jameson, Lillian M.	St. Paul, Minn.	Engl. gr.	Madrono Annex
A. B., Wellesley, 1915.			
Janney, Verne William	Los Angeles	Geol. 14	Delta Tau Delta
Janssen, Edward A., Jr.	San Francisco	Econ. 32	Alpha Delta Phi
Jeffers, John Nace	Los Angeles	C. E. 71	Delta Upsilon
Jefferson, Edward Milton	Inglewood	Educ. 47	Belmont-b
Jenkins, Henry S.	Pittsburgh, Pa.	Geol. 33	Theta Xi
[2]Jenney, William Le Baron	Tucson,Ariz.	Geol. †	Theta Xi
Jensen, Norman Ramsey	Santa Monica	Law 102	Sigma Nu
Jepsen, Hans J.	Gardnerville, Nev.	PreL. 9	Delta Tau Delta
Jertberg, Gilbert Henry	Chino	PreL. 47	Veblen Cottage
Jewett, Harold Wallace	Watsonville	Educ. †9	27 Encina
Joerg, Burdette	Los Angeles	PreL. 13	18 Alvarado
Johannsen, Alfred	Corte Madera	Chem. 55	Theta Xi
Johannsen, Kenneth Hutton	Lemoore	Chem. 9	57 Encina
Johns, Henry Van Dyke	San Francisco	Law 68	DeltaKappaEpsilon
[1]Johns, Watson Lee	Pacific Grove	Educ. gr.	Pacific Grove-p
A. B., College of Pacific, 1912; B. S., California, 1913.			
Johnson, Arthur Lockwood	San Jose	Law gr.	381N.13th,S.J.-sj
A. B., Stanford, 1916.			
Johnson, Geneva	Palo Alto	Lat. gr.	459 Hamilton-p
A. B., Whittier, 1915.			
[1]Johnson, James Floyd	Ceres	Econ. 7	712 Bryant-p
[2]Johnson, L. H. Clemmer	Los Angeles	Law 60	Delta Chi
Johnson, Mildred Lorenz	Pasadena	Ger. 101	7 Salvatierra

Johnson, Oliver Wolcott	Los Angeles	Chem. 14	359 Encina
Johnson, Oscar F.	Mt. Vernon, Wash.	Med. gr.	825 Baker,S.F.-sf
A. B., Stanford, 1915.			
Johnson, Robert Perry	Los Angeles	Phyl. 46	Delta Kappa Ep.
[2]Johnson, Sidney	Red Bluff	M. E.	Sigma Chi
Johnson, Teresita Trescony	Monterey	Fr. 55	Alpha Phi
[1]Johnston,EarlT.	CottonwoodFalls,Kan.	Hist. 100	Phi Kappa Sigma
Johnston, Frank Reed	San Jose	Phyl.-Med. 108	229 Encina
Johnston, Richard L.	Los Angeles	Econ. 103	Theta Delta Chi
Johnston, Russell R.	San Jose	PreL. 12	130 S. 7th., S. J.-sj
Johnstone, Harry Cranston	Oakland	Law 118	403 Encina
Jones, Elton L.	Cupertino	M. E. 140	249 Encina
Jones, Gertrude Flint	Palo Alto	Phyl. 45	1061 Bryant-p
Jones, Henry Macy	Los Angeles	C. E. 87	Theta Delta Chi
Jones, J. Walter	La Porte	Med. gr.	El Camino
A. B., Stanford, 1913.			
Jones, Kellogg	Palo Alto	Geol. 6	1061 Bryant-p
Jones, Lecile	Long Beach	Span. 77	Delta Gamma
Jones, Lloyd	Riverside	PreL. 40	Beta Theta Pi
Jones, Northrope	Chicago, Ill.	Econ. 59	431 Kipling-p
Jones, Philip Hanby	Alhambra	Chem. 84	446 Forest-p
[2]Jones, Robert Morris	Los Angeles	Econ. sp.	Kappa Alpha
[1]Jordan, Charles William	Ouray, Colo.	Geol. 84	Phi Delta Theta
Jouvenat, J. Baxter, Jr.	Sheridan, Wyo.	Econ. 107	Chi Psi
Joyce, Charles Francis	Los Angeles	C. E. 110	Delta Tau Delta
Judah, Elizabeth M.	Los Angeles	Chem. 109	Alpha Phi
[1]Kaboth, George Ernest	Astoria, Ore.	M. E. 48	4 Salvatierra
[1]Kadelbach, Albert	Fullerton	Law †	11 Salvatierra
Kahle, Richard Frederick	San Diego	Law 91	327 Encina
[1]Kaiser, Charles Lawrence	Coalinga	M. E. 24	110 Encina
Kakimoto, Nikizo	Los Angeles	Chem. †11	Japanese Club
Kalischer, Helen Ruth	San Francisco	PreL. 74	59 Roble
Katten, Simon, Jr.	San Francisco	Econ. 38	443 Encina
Kauke, John Harold	Exeter	M. E. 70	5 Santa Ynez
[1]Kavanagh, Alfred L.	San Francisco	Phyl.-Med.†	2150Val.,S.F.-sf
Kawahara, John Y.	Nagoya, Japan	Econ. sp. 111	Japanese Club
Kayser, Frederick Visscher	Pasadena	PreL. 51	Beta Theta Pi
[1]Keast, Fred Elton	Lodi	Econ. 121	Delta Chi
A. B., Stanford, 1917.			
Keefer, Chauncey T.	Los Angeles	M. E. gr.	333 Encina
A. B., Stanford, 1914.			

Keen, Sadie Ernestine	Palo Alto	Ent. 36	1221 Webster-p
Kegley, Carl Smith	Los Angeles	Law 110	448 Encina
Kegley, Helen Catherine	Los Angeles	Zool. 63	9 Roble
Kegley, Hugh Paul A. B., Stanford, 1917.	Los Angeles	Law gr.	306 Encina
Keith, Charles Angus	Candelaria, Nev.	C. E. 104	559 Cowper
Kelker, Geo. D. A. B., Stanford, 1915.	Glenwood Spgs., Colo.	Med. gr.	2102 Calif., S.F.-sf
Keller, Don	Los Angeles	Econ. 79	Phi Gamma Delta
Kelley, Ernest James	Los Angeles	Econ. †14	535 Encina
Kelley, Frank J., Jr.	San Jose	Engl. 45	Sigma Chi
Kelley, Rose Marie	Redlands	Fr. 77	66 Roble
Kellogg, Chever	Avondale, Colo.	PreL. 48	434 Encina
Kellogg, William Scripps	Altadena	PreL. 48	Sigma Nu
Kelly, Dorothy Elizabeth	Palo Alto	Engl. 64	745 Cowper-p
Kelly, Elizabeth Marguerite	Berkeley	Span. 61	36 Roble
Kelly, Harold Richard A. B., Bucknell, 1915.	Buffalo, N. Y.	Law gr.	Alvarado Hall
Kelly, Katharine Louise	Palo Alto	Econ. 9	745 Cowper-p
[1]Kent, Hugh McElwee	Berkeley	Geol. sp.	El Camino
Kerr, James Charles	Seattle, Wash.	Law 75	Alpha Delta Phi
[2]Kerr, Kathleen Margaret	San Mateo	Span.	323 Griffith, S.M.-sm
Kerr, Mildred Lenora	Saratoga	Engl. 79	Sigma Kappa
Kerr, Ruby Meta A. B., Stanford, 1916.	San Jose	Hist. gr.	334 Homer-p
Kester, Edgar C.	Everett, Wash.	Law 108	Phi Delta Theta
Ketcham, Donald E.	Santa Maria	Chem. 102	307 Encina
Kilburn, Richard Guy	San Jose	PreL. 5	64 N. 10th., S. J.-sj
Kimber, Arthur Clifford	Palo Alto	Econ. 76	666 Tennyson-p
Kimber, George Card	Palo Alto	PreL. 10	666 Tennyson-p
Kimber, John Evans	Palo Alto	Law 101	666 Tennyson-p
Kincaid, George Clark	Manila, P. I.	Law 89	Phi Gamma Delta
King, Frank Le Roy	Long Beach	PreL. 49	Delta Chi
King, Harold Nelson	Sacramento	Phyl. 13	17 Salvatierra
King, Marion Reginald A. B., Stanford, 1914.	Porterville	Med. gr.	2102 Calif., S.F.-sf
King, Melissa	Palo Alto	Ger. 78	435 Homer-p
King, Percy Ensign	Napa	Law 97	Delta Tau Delta
King, Vernon Leslie A B., Stanford, 1917.	Petaluma	Geol. gr.	430 Encina
King, William Henry	Winters	Econ. 42	414 Lytton-p

[1]Kingsbury, Henry W.	Newport, Me.	Econ. †6	Alpha Tau Omega
[1]Kingston, William C.	Denison, Tex.	Econ. 1	11 Salvatierra
Kinnear, Lloyd Sumner	San Jose	M. E. 110	421N.4th.,S.J.-sj
Kistler, Ray Henry	Covina	Med. gr.	2102Calif.,S.F.-sf
A. B., Stanford, 1915.			
Kitagawa, Kay Jiro	Kioto, Japan	Med. gr.	1809½Pine,S.F.-sf
A. B., Stanford, 1914.			
Klahn, Arletta Inez	Orange	Ger. 105	319 Middlefield-p
Kleckner, Thomas M.	Mountain View	Engl. 39	MountainView-mv
Knapp, Florence	Portland, Ore.	Econ. 102	Pi Beta Phi
Kneass, Edward D., Jr.	San Francisco	Engl. sp. 54	PhiDeltaTheta
Knight, Goodwin Jess	Los Angeles	PreL. 52	423 Encina
Knollin, Ernesto Ray	Stanford Univ.	Educ. gr.	138 Encina
A. B., Stanford, 1914.			
[2]Knollin,HerbertEdward	StanfordUniv.	Educ. gr.	Madrono
A. B., Stanford, 1911.			
[1]Knotts, Coin Elmer	Sacramento	M. E. 5	334 Cowper
Knowles, Raymond Vincent	San Jose	Chem. 13	496 N. 5th., S.J.-sj
Knowlton, Gladys Julia	Pasadena	Engl. 107	Gamma Phi Beta
[2]Knox, Bertha Miles	Palo Alto	Ed.-G. A. 95	325 Everett-p
Knox, Fannie Mapes	Palo Alto	Hist. 73	325 Everett-p
Knox, George Livingston	Palo Alto	C. E. 9	325 Everett-p
Knudtson, Robert	Kingsburg	Chem. 51	22 Lasuen
Kocher, George Smout	San Jose	Phyl. 48	229 Encina
Koerner, Andrew	Portland, Ore.	Law 112	Kappa Sigma
Kohl, George Fred	San Jose	Bot. sp. 55	24CoeAve.,S.J.
[1]Kohler, Carlos Chester	Los Angeles	Econ. †16	PhiGammaDelta
Kohlmeier, Carl Luhring	Los Angeles	Law 72	304 Encina
[1]Kohner, Oscar	Santa Clara	C. E. 122	790 Mad., S. C.-sc
A. B., Stanford, 1917.			
[2]Kohs, Samuel C.	New York, N. Y.	Educ. gr.	751 Webster
B. S., College of New York, 1912; A. M., Clark, 1914.			
[1]Kolb, Julius Howard	Denver, Colo.	PreL.	2 Salvatierra
Kolberg, Wallace L.	Phoenix, Ariz.	Chem. 12	53 Encina
Koll, Milton Lee	Los Angeles	C. E. 108	322 Encina
[2]Kortick,NeldaGertrude	SanFrancisco	Math.	912 Waverley-p
Kraemer, Mary Webster	San Diego	Lat. gr.	1037 Ramona-p
A. B., Stanford, 1897.			
[1]Kughen, Glen Omar	Los Angeles	M. E. 97	Alvarado Hall
Kuhn, Orta Edward	Berkeley	Med. gr.	1411Eucd.,Berk.-b
A. B., Baker, 1906.			

Kumm, Fred F.	Palo Alto	Phyl. 9	318 Lytton-p
Kumm, Harold F.	Palo Alto	Law 72	318 Lytton-p
Kusama, Yoshio	Nagano Ken, Japan	Med. gr.	1671 Post, S.F.-sf
A. B., Stanford, 1916.			
Kwong, Kwok Chan	Canton, China	Chem. 43	415 Lytton-p
[1]Kyle, George Marion	Portland, Ore.	Chem. 84	Beta Theta Pi
Lachmund, Otto Gray	Palo Alto	Law 70	Alpha Tau Omega
Lacy, Walter P.	Los Angeles	M. E. 12	Zeta Psi
[1]La Fetra, Gladys A.	Los Angeles	Span. gr.	19 Salvatierra
A. B., Stanford, 1915.			
La Forge, Edward Charles	Palms	M. E. 35	Delta Upsilon
La Grange, Mary Barnes	Hollywood	Econ. 70	Madrono
Lakin, Ruth Caroline	Palo Alto	Hist. 43	Delta Delta Delta
La Montagne, Leslie H.	Los Gatos	M. E. †16	67 Encina
[2]Lander, John Augustus	Coalinga	M. E. 72	335 Encina
Lane, Gladys Irene	Venice	Chem. 30	Delta Delta Delta
Lang, Evelyn Lucile	Fullerton	Engl. 75	319 Middlefield-p
Langdon, Lucy Anita	Los Angeles	Ed.-G. A. 43	Alpha Phi
Langford, Verne	Eureka	Chem. 7	28 Encina
Langmade, Eloise Thornton	Palo Alto	Hist. gr.	436 Lytton
A. B., Smith, 1909.			
Lanning, Francis Stroud	Beaumont	Math. 13	22 Lasuen
Largent, Mary Elizabeth	San Diego	Ed.-G. A. 17	KappaKap.G.
Larison, Lee William	Quincy	M. E. 12	250 Encina
Larkin, Harold Peabody	Alameda	Hist. 6	Beta Theta Pi
Laros, Gerald	Grinnell, Ia.	M. E. 15	11 Salvatierra
Larsen, Ira Henry	San Francisco	C. E. 60	Kappa Sigma
Lau, Sik Kei	Canton, China	M. E. 52	415 Lytton-p
[2]Laugenour, William Roy, Jr.	San Francisco	Phyl.	Theta Delta Chi
Laughlin, Reginald S.	San Jose	Law †9	Phi Kappa Psi
Lawrence, Edwin F., Jr.	Sterling, Ill.	Engl. 106	305 Cowper-p
Lawson, Millard Ernest	Boonville	Geol. 73	21 Encina
[2]Lazar, Lucille	Pasadena	Psych. †	69 Roble
Leaf, Edward Glenn, Jr.	Porterville	Econ. 75	531 Encina
Leahy, Kathleen Mabel	Upland	Span. 28	53 Roble
Leak, John Amiel	Penryn	Econ. 71	328 Encina
Leard, Frank J.	Great Falls, Mont.	Law 111	Delta Chi
[1]Learned, Roy Ernest	San Jose	Chem. gr.	732Emory,S.J.-sj
A. B., College of Pacific, 1915.			
Ledyard, Helen Bell	Pasadena	Hist. 118	KappaKappaGam.
Lee, De Witt Rogers	Modesto	PreL. 13	Delta Tau Delta

Lee, Ethel	Palo Alto	Span. 38	970 University-p
Lee, Lola	Palo Alto	Ger. 44	970 University-p
Lee, Ruth	Azusa	Hist. gr.	4 Madrono
A. B., Redlands, 1916.			
Lee, Stephen M.	New London, Conn.	Econ. 71	620 Waverley-p
Lee, Thomas Tsokwing	Canton, China	Educ. 101	415 Lytton-p
Leeds, Albert W.	San Diego	PreL. 16	Kappa Alpha
Leh, Clarke Franklin	San Jose	M. E. 103	322 Encina
Leib, Karl E.	Iron Mountain, Mont.	Law gr.	315 Encina
A. B., Stanford, 1916.			
Leigh, Jerrold D.	Spokane, Wash.	Econ. 18	Alvarado Club
Lernhart, Albert Aloysius	Napa	C. E. 7	541 Ramona-p
[1]Lertora, Laurie Erold	Hollister	Chem. 7	13 Encina
Lesley, Lewis Burt	Los Angeles	Hist. 13	22 Lasuen
Le Suer, Dorothy	Palo Alto	Psych. 76	Alpha Phi
Leve, Lewis Hayd	Stanford University	PreL. 31	Alvarado Hall
Levi, Melbourne	Hoquiam, Wash.	Law 76	407 Encina
Levy, David N.	Prescott, Ariz.	Econ. 50	426 Encina
Levy, Gaston, Jack	San Mateo	Chem.gr.	619Laur.,S.M.-sm
A. B., Stanford, 1916.			
Levy, Germaine J.	San Mateo	Fr. 84	619 Laurel, S. M.-sm
Levy, Milton Lester	Denver, Colo.	Phyl. 43	426 Encina
Lewelling, Raymond	St. Helena	M. E. 14	643 Webster-p
Lewis, Frances Mays	Palo Alto	Ed.-G.A.gr.	319Middlefield-p
A. B., Stanford, 1916.			
Lewis, Georgia Belle	Riverside	Ed.-G. A. †37	Alpha Phi
Lewis, Howard Wesley	Los Angeles	M. E. 123	532 Forest
Lewis, John Kent	San Diego	Phyl. 73	529 Encina
[2]Lewis, Theodore Conrad	SanFrancisco	Law †	Alvarado Hall
[2]Lierle, Dean McA.	Marshalltown, Ia.	Phyl. 20	18 Alvarado
Lifur, Gregory Henry	Sierra Park	Chem. 15	Theta Xi
Liggett, Hazel Mary	Los Angeles	Econ. 75	Roble
Likely, Homer Edmund	Ukiah	M. E. 12	258 High-p
Likely, Robert Donald	Ukiah	M. E. 114	258 High-p
Lillie, Ralph Dougal	Monterey	Phyl.-Med. 119	310 Encina
Lilly, John Kenneth	Ashland, Ore.	PreL. 48	Theta Delta Chi
Linn, Frank Chester	Santa Ana	M.E.10	Cowper & Tenny.-p
Linn, George I.	Huntington Beach	Chem. 72	454 Hamilton-p
Lissner, Louis Meyer	Los Angeles	Econ. 47	325 Encina
Little, George Barnard	Whittier	C. E. sp. 78	Phi Kappa Psi
[1]Little, Kenneth Keith	San Diego	Phyl. 26	Sigma Nu

Little, Paul Livingston	Modesto	Econ. 14	405 Emerson-p
Liversidge, Esther S.	Los Angeles	Ed.-G. A. gr.	Alpha Phi
A. B., Stanford, 1916.			
[1]Lloyd, William Weed	Prescott, Ariz.	Econ. 17	5 Cabrillo
Locke, John Goodwin	Palo Alto	Phil. 78	951 Hamilton-p
Locke, John Loor	Seattle, Wash.	Law 73	203 Encina
Lockwood, Roland M.	Portland, Ore.	Law 103	338 Encina
Lockwood, William Ellison	Redlands	Econ. 122	121 Encina
Loel, Wayne Frederick	Saratoga	Geol. gr.	317 Encina
A. B., Stanford, 1916.			
Loftus, Edna	Whittier	Engl. 106	Chi Omega
Logie, Helen Corita	Redlands	Fr. 76	Pi Beta Phi
Lonabaugh, Alger W.	Sheridan, Wyo.	PreL. 40	Sigma Chi
Long, Charles Stuart, Jr.	Hayward	PreL. 46	Delta Kappa Ep.
Long, Esther Melora	Perris	Fr. gr.	8 Alvarado
A. B., Redlands, 1912.			
Long, Ruth	Hayward	Educ. 116	Gamma Phi Beta
Long, Thomas Gordon	Nevada City	Hist. 11	60 Encina
Loomis, Emily Mary	Pasadena	Engl. 45	KappaAlphaTheta
[1]Loomis, Ivan Aldace	Arroyo Grande	Econ. 18	94 Encina
Loomis, Marion Mason	Chicago, Ill.	Engl. 12	Alpha Omicron Pi
Lorentzen, Kay G.	San Francisco	Med. gr.	1356 Post, S. F.-sf
A. B., Beloit, 1905.			
Lormer, Elizabeth Bernice	Pasadena	Ger. 104	8 Roble
[1]Losh, William Jackson	Mill Valley	Phil. 102	16 Salvatierra
Loucks, Charles E.	Mountain View	M.E.94	MountainView-mv
Love, Ernest A.	Prescott, Ariz.	M. E. 78	362 Encina
Lowe, Frances E.	Palo Alto	Math. 76	575 Hawthorne-p
Lownsberry, Eleth Agnes	Palo Alto	Engl. 10	1048 Ramona-p
Lowrey, Vivian Frances	Pasadena	Econ. 46	Pi Beta Phi
Luhrs, George H. N., Jr.	Phoenix, Ariz.	Law 85	215 Encina
[2]Luke, Ittai Albert	Ottawa, Kan.	Phys. gr.	25 Salvatierra
A. B., Kansas, 1914.			
[1]Lum, Joe Woon	Canton, China	C. E. 121	405 Emerson-p
A. B., Stanford, 1917.			
Lummis, Katharine	Baltimore, Md.	Lat. gr.	7 Salvatierra
A. B., Stanford, 1907, A. M., 1911.			
Lund, Henry Joseph	San Jose	Zool. 76	526Spencer,S.J.-sj
Lund, Ralph Frederick	San Francisco	C. E. 9	Alvarado Hall
Lutz, Elsie Henrietta	Santa Ana	Hist. †7	KappaAlphaTheta
Lynn, George Ignatius	San Jose	Econ.sp.12	87N.14th,S.J.-sj

Lynn, Leo Thomas	Palo Alto	M. E. 50	181 Tasso-p
Lyon, Leonard Saxton	Los Angeles	Law 80	Delta Chi
Lyon, Nora Cordelia	Palo Alto	Chem. 6	300 Hamilton-p
Lyon, Ray Blanchard	Sacramento	Law 115	660 Waverley-p
Lyon, Richard Forbes	Los Angeles	Chem. 12	359 Encina
Lyons, Frank	Portland, Ore.	Law 79	424 Encina
Lysle, Heloise	Alhambra	Lat. 47	27 Madrono
Lytle, Robert Sidney	Los Angeles	Law 111	Kappa Sigma
McAllister, Decker G.	San Mateo	M.E.10	224Sta.Inez,S.M.-sm
McAnear, Francis Towne	Sacramento	PreL. 11	17 Salvatierra
McCabe, Barkman C.	Los Angeles	PreL. 15	Kappa Alpha
McCabe, Edward Everett	Palo Alto	Phys. gr.	636 Waverley-p
A. B., Stanford, 1915.			
McCartney, Charles E.	San Francisco	C. E. 15	Kappa Alpha
McCarty, Harold L.	Fellows	M. E. 53	54 Encina
McCarty,JosephineM.	SaltLakeCity,U.	Lat. 65	Delta Gamma
McCausland, Harriet R.-L.	Saratoga	Engl. 110	32 Roble
McClintock, Miller L.	Long Beach	Engl. 81	555 Waverley-p
McCloskey, Downs	Durango, Colo.	Geol. 58	Delta Upsilon
McClung, Ryland E.	Portland, Ore.	Law 77	408 Encina
[2]McColloch,FrankCleveland	Baker,Ore.	Law 83	Kappa Sigma
McComb, Marshall F.	Los Angeles	Law 124	Delta Chi
McCombs, William Clyde	Fullerton	Phyl. †10	824 Bryant-p
McCormack, Dwight F.	Rio Vista	PreL. 13	17 Salvatierra
[1]McCormack,Lincoln,Jr.	Medford,Ore.	C. E. sp. 29	Sigma Nu
McCormick, Charles Leslie	Fowler	Hist. 37	19 Salvatierra
[1]McCracken,VirginiaL.	Livingston,Mt.	Engl. 45	Chi Omega
McCreary, Laura May	Hanford	Engl. 106	Sigma Kappa
McDaniel, Bruce W.	Salem, Ore.	Law gr.	El Camino
A. B., Willamette, 1915.			
[2]McDaniel,DavidPaul	CouncilBluffs,Ia.	PreL. †	846 Waverley-p
McDermoth,AlansonW.	Aberdeen,Wn.	Chem. 65	Cupertino
[1]McDermott, Elizabeth L.	Los Altos	Ed.-G. A. 120	Los Altos-l
A. B., Stanford, 1917.			
[1]McDermott, Louis William	Los Altos	Geol. 67	Theta Delta Chi
McDiarmid, Donald Philip	Stockton	PreL. 13	17 Salvatierra
McDonnell, Anne Ethel	Portola	Span. 48	Redwood City-r
McEuen, Albert Harry	Los Angeles	Geol. 64	Beta Theta Pi
[1]McFarland, David H.	Phoenix, Ariz.	Chem. 13	22 Lasuen
McGaffey, Herbert S.	Los Angeles	C. E. 29	209 Encina
McGillivray, Harold Payne	Sacramento	PreL. 14	Phi Kappa Sigma

McGilvray, Malcolm C.	StanfordUniv.	Econ. 77	Sigma Nu
Machado, John H.	San Luis Obispo	Law gr.	555 Encina
A. B., Stanford, 1916.			
McInerney, John Enright	San Dimas	Econ. 29	1121 Bryant-p
McIntyre, Wilmot James	Glendale	Chem. 73	Theta Xi
[1]Mack, Arthur McLure	Oakland	Econ. 47	Phi Kappa Sigma
Mack, Charles Edwin, Jr.	Elk Grove	C. E. sp. 11	511 Encina
McKay, Wilbur Martland	Fresno	M. E. 49	Chi Psi
[2]McKee, Donald	San Francisco	C. E. 29	Theta Delta Chi
Mackel, James P.	Los Angeles	Law 112	Delta Chi
McKenna, Mary Susan	Lemoore	Econ. 110	66 Roble
McKenney, Arthur C., Jr.	Belvedere	Phyl. 13	Phi Kappa Psi
[1]McKibbon, Thomas Stuart	Los Gatos	Law †5	Los Gatos-l
McKim, Horton Albert	Tonopah, Nev.	M. E. 108	128 Encina
McLachlan, James Douglas	Pasadena	Law 108	Zeta Psi
McLaren, James	San Jose	Chem. 13	547 Vine, S. J.-sj
McLeish, Archibald Duncan	Millbrae	C. E. 14	18 Alvarado
McLellan, Edith	Burlingame	Engl. 8	Gamma Phi Beta
McMahon, Harry E.	Pacific Grove	Chem. gr.	Campus School
A. B., Stanford, 1916.			
[1]McManus, Joseph A.	Anaconda, Mont.	Chem. 120	216 Emerson
A. B., Stanford, 1917.			
McMenamin, James T.	Sebastopol	PreL. 16	558 Encina
[1]McMurtry, Leslie B., Jr.	San Francisco	PreL.	Chi Psi
McNally, Frank E.	NewRichmond, Wis.	Econ. †15	Phi Kappa Psi
McNally, Joseph A.	NewRichmond, Wis.	Econ. †12	Phi Kappa Psi
[2]McNamee, Donald Edwin	Helena, Mont.	Geol.	Delta Upsilon
McNeal, Thomas Carl	Los Angeles	C. E. 109	425 Encina
[1]McNees, Marjorie A.	Whittier	Ed.-G. A. gr.	Chi Omega
A. B., Stanford, 1916.			
MacNeill, Charles Donald	Atherton	Phyl. 30	837 Cowper-p
[2]McNulty, Hugh William	Fresno	Geol. sp. 45	SigmaAlphaEp.
McPherson, James Douglas	San Jose	Geol. 79	41 Settle, S. J.-sj
McQuown, Lillian L.	Porterville	Fr. gr.	Chi Omega
A. B., Stanford, 1916.			
[2]Macy, Lloyd	Merced	Chem. 79	249 Encina
Madden, Francis M.	Bay City, Mich.	Chem. 48	18 Alvarado
Maddock, Mary Grace	Sacramento	Engl. 15	Delta Gamma
Maddox, Dickson Farnsworth	Visalia	Law gr.	634 Hamilton
A. B., California, 1916.			
Mahoney, Daniel A.	San Francisco	Phyl. †14	534 Encina

Mahoney, Lucille J.	Wallace, Ida	Bact. 8	49 Roble
Mail, Elizabeth Elouise	Los Angeles	Span. 6	2 Madrono
[1]Mail, Harriet Alter	Los Angeles	Hist. 87	Pi Beta Phi
Makelim, Russell B.	Portland, Ore.	PreL. 15	Alvarado Club
Malcolm, Vernon Young	Palo Alto	Law 58	379 Everett-p
Malloneé, Richard C.	Salt Lake City, Utah	PreL. 10	Phi Kappa Sigma
Maltby, Joseph McKinley	Long Beach	Law gr.	230 Encina
A. B., Stanford, 1916.			
Mantz, Ruth Walker	Redwood City	Engl. 42	502 Edgwd., Redw.-r
Mapes, Gordon Walter	Campbell	PreL. 45	706 Cowper-p
Marcus, Anita	San Francisco	Math. 110	Delta Delta Delta
[1]Marino, Herbert Daniel	Stockton	Phyl. 55	310 Encina
Markel, Daniel B.	St. Anthony, Ida.	Engl. 10	23 Encina
Marker, William Maxwell	La Mesa	C. E. 113	El Camino
[1]Marks, Thomas George	Prescott, Ariz.	Phyl. 11	197 Encina
[2]Marquess, Roy Steven	Burley, Ida.	M. E.	310 High-p
Marriott, Joseph Stacey	Modesto	Chem. †14	College Terrace
Marshutz, Herbert S.	Los Angeles	Engl. 109	428 Encina
Marston, Homer Eugene	San Rafael	Phyl. 73	150 Encina
Marston, Theresa Jane	San Rafael	Hist. 32	Chi Omega
Martie, Menga Anna	Los Angeles	Chem. gr.	39 Roble
A. B., Southern California, 1916.			
Martin, Edward Richard	Watsonville	Law 58	134 Encina
Martin, Hugh Bradshaw	Los Angeles	PreL. 9	Delta Upsilon
Martin, Mary Frances	Los Angeles	Psych. 45	Gamma Phi Beta
Martin, Ralph Henry	San Jose	Span. †36	46 R. D., S.J.-sj
Martin, Walter T.	Phoenix, Ariz.	Phyl. 10	433 Encina
Marx, Eleanor	Palo Alto	Econ. 42	356 Lincoln-p
Mason, Florence McLaine	Palo Alto	Engl. 72	555 Kellogg-p
[2]Mason, Grace Amelia	San Jose	Engl. 60	535 S. 10th, S.J.-sj
Mason, Herbert L.	Fond du Lac, Wis.	Bot. 22	412 Cowper-p
Mason, Walter E.	Fond du Lac, Wis.	Bot. 24	412 Cowper-p
[2]Masson, Adele Anna	San Jose	Engl. †	68 Roble
Masters, Edward W.	Portland, Ore.	Geol. 61	316 Encina
Mathews, Bruce Reid	Scipio, Utah	Chem. 70	921 Ramona-p
Mathews, Margaret Mary	Eureka	Fr. gr.	Pi Beta Phi
A. B., Stanford, 1917.			
Mathews, Samuel S.	Los Angeles	Phyl. 10	17 Salvatierra
Mattei, Albert Chester	Los Olivos	Geol. 91	Phi Delta Theta
Matteson, Alice Bell	Petaluma	Math. 66	31 Roble
Matthews, Van Aernam	Milwaukee, Wis.	PreL. 8	350 Encina

Maurer, Hazel Leona	Los Angeles	Educ. 103	Chi Omega
Maurer, Rix	Alameda	M. E. 105	Beta Theta Pi
[2]Mayberry, Beatrice	Alhambra	Math. †	27 Madrono
Mayeda, Isamu	Chiba Ken, Japan	E. E. gr.	733 Ramona
A. B., Stanford, 1916.			
Maynard, Elizabeth Stanley	San Jose	Hist. 106	26 Roble
Maynard, Merlin T. R.	San Jose	Phyl. 13	28 Encina
Meese, Arthur Bradly	Meridian	Chem. †9	College Terrace
[1]Meese, Gilbert Haven	Meridian	M. E. 18	College Terrace
[1]Meeter, John Everitt	Hollister	Phyl. 2	Encina
[1]Meinecke, Joseph B.	Paia, Maui, T. H.	M. E. †6	4 Salvatierra
Meinhard, Arthur R.	New York, N. Y.	Bact. sp. 86	DeltaTau Delta
Melcon, Zenas K.	Kingsburg	Geol. gr.	305 Encina
A. B., Stanford, 1917.			
Mendel, Frank	Campbell	M. E. 14	1004 Emerson-p
Mensor, Merrill C.	San Francisco	Chem. 11	Stanford Union
Mercer, Floyd	Palo Alto	Econ. gr.	929 Emerson-p
A. B., Stanford, 1916.			
Merino, Rey Montague	Madera	M. E. 6	Theta Delta Chi
Merrill, Paul Carver	Los Angeles	Chem. 76	Alvarado Club
Metcalf, Stanley C.	Santa Barbara	Chem. 15	54 Encina
Metz, Dorothy Amanda	Sherman, Tex.	Econ. 105	15 Salvatierra
Metzler, David Russell	Los Gatos	Hist. 46	173 Lytton-p
Metzler, William Herman	Los Gatos	PreL. 46	173 Lytton-p
[1]Meyer, Charles Hillegass	Menlo Park	C. E. 129	Menlo Park-m
A. B., Stanford, 1917.			
Meyers, Robert Koehler	Tulare	Law 73	346 Encina
[1]Michael, Wilford McLain	Lordsburg	PreL. 7	Palo Alto Hotel
Mickle, Aileen Josephine	Centerville	Span. 74	Madrono
Millard, Bryant Tilden	San Jose	C. E. 102	30 Encina
[2]Miller, Douglas Delmer	Santa Cruz	Econ. 11	Delta Tau Delta
Miller, Frank Robert	Los Angeles	M. E. 107	Alvarado Club
Miller, Herman P., Jr.	Harrisburg, Pa.	M. E. 125	349 Encina
Miller, Hyman	Los Angeles	Bact. 72	37 Encina
[1]Miller, James Andrew	San Francisco	Law gr.	173 Lytton-p
A. B., Stanford, 1915.			
Miller, John S., Jr.	Huntington Park	PreL. 12	546 Encina
Miller, Joy Seelye	Ipswich, S. D.	Engl. 94	84 Roble
Miller, Mabel Alta	Dinuba	Engl. gr.	638 Channing-p
A. B., Stanford, 1917.			
Miller, Mildred Anna	Seattle, Wash.	Fr. 11	Delta Gamma

[2]Miller, Raymond B.	Terre Haute, Ind.	Econ. †	840 Bryant-p
Miller, Russyl E.	St. Anthony, Ida.	Chem. 10	Theta Xi
Miller, Waldo Swiers	Portland, Ore.	Law gr.	334 Lincoln-p
A. B., Stanford, 1917.			
Miller, Wayne Leslie	Palo Alto	Law 86	Delta Chi
Millett, Emma Priscilla	Sunnyvale	Bot. †31	Sunnyvale-s
Millett, George Wilber	Sunnyvale	Med.gr.	2446 Wash., S.F.-sf
A. B., Stanford, 1914.			
[1]Millington, Wayne R.	San Francisco	Engl. 15	18 Alvarado
Mills, Zetta Mabel	Palo Alto	Hist. gr.	534 Forest-p
A. B., Stanford, 1916.			
Miner, Elliott Steele	Cupertino	PreL. 11	Cupertino-c
Minssen, Herman	Sterling, Ill.	Educ. gr.	746 Univ., S.J.-sj
A. B., Stanford, 1916.			
Missner, Frank R. S.	San Francisco	Med. gr.	2102 Calif., S.F.-sf
A. B., Stanford, 1914.			
[1]Mitchell, Emery Ferguson	Belvedere	PreL. 41	Phi Kappa Psi
Mitchell, George Rankin	San Diego	Engl. 10	22 Lasuen
[1]Mitchell, Hobart McK.	Portland, Ore.	PreL. 39	18 Alvarado
Mitchell, Ralph John	Tustin	M. E. 33	Delta Upsilon
[1]Mitchell, Ruth Webber	Ontario	Fr. 71	Chi Omega
Moise, Elsie Harriett	San Francisco	Span.	Delta Delta Delta
Molloy, Alice Kathryn	Palo Alto	Engl. 10	500 Palo Alto-p
Monroe, Merton Keith	Monrovia	PreL. 7	Alpha Delta Phi
Montague, Richard Aga	Reedley	Phys. 13	204 Encina
[2]Montgomery, Dorothy	Marysville	Fr. †27	Alpha Phi
Montgomery, James E.	Morgan Hill	PreL. 51	Sigma Nu
[1]Montgomery, Kenneth Carter	Hayfork	PreL.	425 Ruthven-p
Montgomery, Robert Bruce	San Jose	Phil. 15	220 S. 8th, S. J.-sj
Montilla, Antonio J.	Manila, P. I.	Econ. sp. 6	344 Emerson
Moore, Alice	Los Gatos	Engl. gr.	Alpha Om. Pi
A. B., Stanford, 1917.			
Moore, Charles Dunn	Ouray, Colo.	Law gr.	251 Emerson-p
A. B., Stanford, 1917.			
Moore, George Thomas	Alhambra	PreL. 13	Alvarado Hall
Moore, James E., Jr.	Spokane, Wash.	M. E. 16	Alvarado Club
Moore, Marguerite	San Jose	Hist. 57	416 S. 6th, S. J.-sj
Moore, Neil Preston	Palo Alto	Chem. gr.	564 Hamilton-p
A. B., Stanford, 1914, A. M., 1915.			
Moore, Sidney Fremont	Monrovia	Engl. 110	12 Roble
[2]Moore, Sylvia Lorene	Los Angeles	Engl.	Madrono

Moore, William Homer	Selma	Med. gr.	1939 Clay, S.F.-sf
A. B., Stanford, 1915.			
Morgan, Arthur L.	Canon City, Colo.	M. E. 115	445 Encina
[2]Morgan, Frederick Enno	Palo Alto	Educ. gr.	223 Cowper-p
A. B., Central University, 1893.			
Morgan, Theodore H.	Victoria, B. C.	M. E. 76	11 Salvatierra
Morison, Bradley L.	Minneapolis,Minn.	Econ. 16	9 Encina
Moritani, Tomikichi	OkayamaKen,Jap.	Econ. sp. 51	733 Ramona-p
Mork, Donald James	Mountain View	Math.36	MountainView-mv
Morris, Grace	Palo Alto	Span. 8	705 University-p
[1]Morris, John Knox, Jr.	Cloverdale	Phyl. 35	83 Encina
Morrison, Lily	Covelo	Zool. †39	Alpha Om.Pi
Morse, Genevieve	Lodi	Ger. gr.	Alpha Om. Pi
A. B., Stanford, 1916.			
[2]Morse, Herbert Kennedy	Palo Alto	Econ.	531 Cowper-p
Morton, Charlotte A.	Seattle, Wash.	Educ.-G.A. gr.	Mirada ave
B. S., Kansas Agricultural College, 1908.			
Mosey, Helen D.	Evanston, Wyo.	Educ. †13	49 Roble
Mosher, Frank B.	NewRichmond,Wis.	Chem. 105	22 Lasuen
Mosiman, Floyd W.	Aberdeen, S. D.	Econ. 45	Alvarado Club
Mott, Rodney L.	San Jose	Econ. gr.	135 Encina
A. B., Stanford, 1917.			
Moule, Manley Axtell	Cleveland, O.	Econ. 103	403 Encina
Moulton, Everts	Los Angeles	PreL. 11	Delta Kappa Ep.
Moy, Hymn	San Francisco	Chem. sp. 11	415 Lytton-p
Mukaiyama,MasahachiP.	Hiroshima,Jap.	M. E. gr.	369 Addison-p
A. B., College of Pacific; A. M., Stanford, 1916.			
Mulford, Grace Eudora	Los Angeles	Engl. 50	Sigma Kappa
Mullaly, Edward Francis	Vallejo	Med. gr.	559 Page, S. F.-sf
A. B., Stanford, 1915.			
Murphy, James Edward	San Francisco	Phyl. †26	508 Encina
Murphy, Joe Thomas	Tonopah, Nev.	PreL. 12	501 Encina
Murray, Emily Southwell	Hanford	Engl. 43	Delta Gamma
Murray, Francis King	Palo Alto	Greek 108	1019 Bryant-p
Murray, Minerva	Palo Alto	Greek 16	1019 Bryant-p
Murray, Virginia	San Gabriel	Med. gr.	2321Sacto.,S.F.-sf
A. B., Stanford, 1914.			
Musser, Edgar Hale	Los Angeles	Geol. 11	Alvarado Hall
[1]Myers, Louis John	Walnut Grove	Econ. 5	Sigma Nu
Nagel, Gunther W.	Palo Alto	Phyl-Med.110	356Addison-p
Nagel, Margaret Ruth	Los Altos	Ed.-G. A. 42	Delta Gamma

[2]Nagel, Otto Arno	Palo Alto	PreL.	356 Addison-p
Nakabayashi, Koshiro	San Francisco	M. E. 15	Japanese Club
[1]Nakada, James Robert	San Francisco	Phyl. 26	281 Embarcadero
Nakamoto, Frank Y.	Yamaguchi-Ken, Jn.	Econ. 108	733 Ramona-p
Narvestad, Olga M.	Spokane, Wash.	Hist. 71	Delta Delta Delta
Needham, Chauncey E.	San Diego	PreL. †11	Delta Chi
Needham, Roy Elwood A. B., Stanford, 1916.	Tracy	Law gr.	Delta Chi
[1]Neuner, Clarence Martin	Los Angeles	Law 41	Delta Upsilon
Newberry, Marion Helen	Los Angeles	Span. 80	Alpha Phi
[1]Newbury, Donald R.	Klamath Falls, Ore.	Law †	Sigma Nu
[1]Newhouse, Rolley Wilson	Coachella	Law 69	Kappa Alpha
Newlove, Ralph Dewey	Arroyo Grande	Econ. 6	236 Encina
Newman, Andrew J. A. B., Washington, 1910, A. M., 1911.	Turner's Sta., Ky.	Econ. gr.	College Terrace
Newnan, Eva May A. B., Stanford, 1915, A. M., 1916.	Mountain View	Lat. gr.	Miss Harker's Sch.-p
Newsom, John Branner	Palo Alto	Geol. 14	1129 Cowper-p
[1]Nichols, Alan Hammond	Palo Alto	Econ. 52	1345 Webster-p
Nichols, John Ralph	Palo Alto	Ent. 10	1345 Webster-p
[1]Nicholson, Marshall John	Willcox, Ariz.	PreL. 30	4 Salvatierra
Niebel, Herbert Lee A. B., Stanford, 1914.	Palo Alto	Bact. gr.	1106 Bryant-p
Nielsen, John William A. B., Washington State College, 1911.	San Francisco	Med. gr.	2730 Sacto., S.F.-sf
Niklason, Clarence Ray	Audubon, Ia.	Law 89	1227 Byron-p
Nishimura, Hatsutaro	San Francisco	M. E. 90	1061 Bryant
Nisson, Estelle Geneva	Santa Ana	Econ. 75	Chi Omega
[1]Noack, Thea	Sacramento	Psych. 50	Alpha Phi
[1]Noble, Harold Albert A. B., Stanford, 1916.	Stockton	Econ. gr.	Phi Kappa Psi
Noble, Warham Metcalf	San Mateo	PreL. †7	Sigma Nu
[1]Nolan, Edward Dana A. B., Stanford, 1917.	Palo Alto	Geol. 124	566 Hawthorne-p
Nolan, Frank L.	Palo Alto	Bot. 113	566 Hawthorne-p
Noonan, William F.	Glenwood Spgs., Col.	Law 133	345 Encina
Nordmann, Bernhard F.	Sacramento	Hist. 108	235 Emerson-p
North, Frances A. B., Stanford, 1915.	Cupertino	Engl. gr.	Cupertino-c
Norton, Eleanor	Long Beach	Hist. 102	Gamma Phi Beta
Norton, John Kelley A. B., Stanford, 1916.	Palo Alto	Educ. gr.	642 Webster-p

[1]Norton, Willis Sherwood A. B., Stanford, 1917.	Stockton	M. E. 122	Sigma Alpha Ep.
Norviel, Scott Lamar	Phoenix, Ariz.	Law 96	851 Lytton
Noyes, Harmon David	Middletown	PreL. 7	Encina
Nuffer, Emily Carolyn	Whittier	Engl. 79	25 Roble
Oberg, Stanford Wilbur	Riverside	C. E. 105	Theta Xi
Oberlé, Eugene Jean A. B., Stanford, 1915, A. M., 1916.	Palo Alto	Fr. gr.	611 Bryant
[1]O'Brien, Helen Patricia A. B., College of Pacific, 1915.	San Francisco	Engl. gr.	Roble Hall
O'Connell, Francis A. A. B., Stanford, 1915.	Mountain View	Law gr.	MountainView-mv
Odell, Geoffrey Flemming	Riverside	Econ. 14	4 Salvatierra
Odenheimer, Marguerite	Los Angeles	Econ. 73	AlphaOmicronPi
Ogden, Edith Maples	Bakersfield	Hist. 47	Alpha Phi
Okuma, Genzo	Okinawa, Japan	C. E. 28	Japanese Club
Olinder, Lawrence Gans	San Jose	Educ. 54	507 Encina
[1]Oliver, George W.	Pocatello, Ida.	Econ. 11	481 Lytton-p
Oliver, Henry McRae	Los Gatos	M. E. 31	11 Salvatierra
Oliver, Oscar Lee	San Jose	Econ. sp. 40	18 Alvarado
Oliver, Robert Watson	Los Angeles	Law 70	Delta Upsilon
Olmsted,MargaretStanley	LosAngeles	Bact. 82	Kap. Alpha Theta
[2]Olsen, John A. B., Stanford, 1915.	Palo Alto	Ed.-G. A. gr.	321 Fulton-p
Ommanney, Katharine A. A. B., Colorado Teachers College, 1914.	Denver, Colo.	Engl. gr.	Madrono Annex
[2]O'Neill, Edward Alexander	Santa Cruz	M. E.	Phi Kappa Psi
Onserud,HelenAndrine	Spokane,Wash.	Bact. 13	Delta Delta Delta
Ordway, Frank Aaron	Monterey	Law 79	431 Encina
Ordway, Gladys A. B., Mills, 1916.	Los Angeles	Lat. gr.	Pi Beta Phi
Organ, William Robert	Palo Alto	Phys. 59	454 Forest-p
Ormsby, Herbert Findlay	Bonsall	Econ. 11	133 Encina
Ostrander, Frank Merced	Palo Alto	Law sp. 40	271 Univer.-p
Ostrander, Ray Wellington	Ceres	Econ. 46	Veblen Cottage
Ostroff, Robert Allison A. B., Nevada, 1915.	Reno, Nev.	Med.gr.	2101aWbstr.,S.F.-sf
Otis, Arthur Sinton A. B., Stanford, 1910; A. M., 1915.	Pasadena	Educ. gr.	25 Salvatierra
Ott, Kathryn George	Palo Alto	Econ. 13	328 Guinda-p
Overacker, Louise A. B., Stanford, 1915.	St. Helena	Econ. gr.	52 Roble

[1]Overacker, Ray H.	Huntington Beach	Law 90	115 Alma-p
Owen, Ethel Dale	Los Gatos	Med.gr.	2401Sacto.,S.F.-sf
A. B., Stanford, 1914.			
Owen, Richard Lewis	Palo Alto	Chem. 87	151 Addison-p
Owen, William McDermott	Hollywood	PreL. 34	Delta Kappa Ep.
[1]Owens, Winifred Lee	Van Nuys	Engl. †17	Chi Omega
Oyama, Takehiko	Los Angeles	M. E. 15	Japanese Club
Oyama, Yutaka	Kagawa Ken, Japan	Phyl. sp. 14	733 Ramona-p
Page, Mabel Lucy	Pasadena	Hist. 15	635 Homer-p
Pai, Hu Wei	Amoy, S. China	C. E. 24	405 Emerson-p
Pann, Edwin Huff	Hawthorne	M. E. 42	148 Encina
Pardee, Starr Carlton	Riverside	M. E. 14	Kappa Alpha
Park, Lois Kentfield	San Francisco	Phyl. 13	Delta Delta Delta
Parker, Frank Harold	Redwood City	M. E. 60	320Elm,Redwd.-r
Parker, Herbert Colvin	San Bernardino	M. E. 113	Sigma Chi
Parker Reginald Edward	Redwood City	Engl. 43	320Elm,Redwd.-r
[2]Parker, William Leonard	Palo Alto	E. E. gr.	1028 Emerson-p
B. E., New Zealand, 1912.			
Parks, Clarence Elbert	Stockton	Chem. 13	Phi Kappa Sigma
[1]Parsons, Clarence Wilbur	Coalinga	Geol. 92	89 Encina
Parthum, Edward F.	Phoenix, Ariz.	Chem. 76	Theta Xi
[1]Partridge,HebertGeorge	Searsport,Me.	Econ. †8	The Alexandria-p
Partridge, Joseph A.	Nampa, Ida.	Law gr.	Sigma Alpha Ep.
A. B., Stanford, 1915.			
[2]Patacsil, Locas M.	Banang, Union, P. I.	M. E. 23	6 Cabrillo
[2]Patten, Ryder	Sacramento	Hist.	353 Encina
Patterson, Edith Adeline	San Jose	Zool. 44	Sigma Kappa
Patterson, Mary Aubrey	El Centro	Ger. 98	Delta Gamma
Patterson, Thomas Shaw	Evanston, Ill.	Engl. 79	503 Encina
Paul, William Glae	Wickenburg, Ariz.	Law 132	Delta Tau Delta
Paulsen, Abby Belle	Palo Alto	Engl. 72	602 Waverley-p
Paulsen, Jasper William, Jr.	Palo Alto	Geol. 104	602 Waverley-p
Paulson, Arthur Bernard	Amble, Mich.	Geol. 7	904 Cowper-p
Pauly, Irene Margaret	Hebron, Colo.	Math. 95	54 Roble
Payne, Alan Edward	Morgan Hill	Educ. sp. 128	232 Encina
Peacock, Howard G.	Long Beach	C. E. 77	512 Encina
[1]Pearce, Reba	Palo Alto	Hist. 30	1024 Emerson-p
Pease, Clarence Howard	Stockton	Hist. 12	62 Encina
Peck, Emily Gilman	Hollywood	Hist. 108	42 Roble
Peck, Maybelle Claire	Compton	Ed.-G. A. 123	Alpha Phi
Peckham, Phyllis A. M.	Los Angeles	Engl. 107	Delta Delta Delta

Pedersen, Arthur Arlette	Petaluma	M. E. †9	118 Encina
Pedley, Eric Leader	Riverside	C. E. 31	Chi Psi
[1]Pedley, Lionel Everard	Riverside	C. E. †65	Chi Psi
Peek, Marian Luverne	Long Beach	Hist. 87	19 Madrono
Pehl, Arthur Hales	Upland	Law 70	348 Encina
Pehl, Earl W. C.	Upland	M. E. 51	348 Encina
Pehrson, Elmer Walter	San Jose	Geol. 80	347 Encina
Pelouze, Robert F.	Eagle Point, Ore.	PreL. 36	Sigma Nu
Pelton, Benjamin W.	New York, N. Y.	Engl. 96	Phi Gamma Delta
Penniman, Arthur Webb	Burlingame	M. E. 42	Burlingame-b
Pennington, Thomas Edmund	Belmont	Chem. 28	Belmont-b
Perry, Altha	Kingman, Ariz.	Law gr.	Chi Omega
A. B., Stanford, 1915.			
Perry, Samuel Salisbury	Los Angeles	C. E. †18	Phi Delta Theta
Peters, Raymond Ashley	SanFrancisco	Educ. sp. 105	262Kingsley-p
Petersen,HenryEdward	Richfield,Utah	Chem. 38	Theta Xi
Peterson, Helen Myranda	Palo Alto	Engl. 104	847 Bryant-p
Petree, Neil H.	San Jose	Econ. 49	Delta Tau Delta
Pettingill, Henry S., Jr.	Los Angeles	C. E. 100	Beta Theta Pi
Pettit, Albert Victor	San Francisco	Med.gr.	2446Wash.,S.F.-sf
A. B., Stanford, 1915.			
Phair, Carter Niles	Petaluma	Educ. 6	410 Encina
Phelps, Edward Joseph, Jr.	Omaha,Neb.	Econ. 36	Alpha Delta Phi
[1]Philip, Charles Whipple	San Francisco	Phyl. 37	Phi Kappa Sigma
Philips, Serena	Palo Alto	Bot. gr.	612 Waverley-p
A. B., Stanford, 1916.			
[1]Phillips, Jonathan Edward	Modesto	Law gr.	Delta Chi
A. B., Stanford, 1916.			
Phillips, Joseph Leslie, Jr.	Los Angeles	Econ. 15	Delta Tau Delta
Phillips, Wendell Keigh	Portland, Ore.	Law 129	Kappa Alpha
[2]Pierce, Fred Ross	Sacramento	PreL.	Phi Gamma Delta
Pike, Kelton William	Modesto	Econ. 11	Sigma Chi
[1]Pilcher, Velona Bissell	Long Beach	Engl. 85	Madrono Annex
Pillsbury, Stirling Gainer	Long Beach	Phyl. 15	402 Encina
Pinney, Tucker Lee	Phoenix, Ariz.	Econ. 75	346 Encina
[1]Platt, John Crosby	Portland, Ore.	Econ.	Alpha Tau Omega
[1]Platt, Lawrence Thayer	Fresno	Econ. 7	Chi Psi
Plummer, Dorothy Marie	Centerville	Engl. †20	Alpha Phi
Popp, William Louis	San Jose	C. E. 103	63 Lenzen, S. J.-sj
Porter, Frederick Chicago	Chicago, Ill.	Greek †5	1121 Bryant-p
[1]Porter, Gertrude Elizabeth	Boise, Ida.	Engl. 27	Delta Delta Delta

Post, Gladys Myrtle	Tacoma, Wash.	Ger. 18	1035 Forest Court
Post, Mary Bolton	Palo Alto	Engl. 102	1229 Webster-p
Potter, John Alfred, Jr.	Los Angeles	Bot. 39	547 Encina
[1]Pound, Delmer E.	Santa Barbara	M. E. 4	Alvarado Club
Powell, Floyd Gordon	Bertrand, Neb.	PreL. 10	251 Middlefield
Pratt, Dudley James	Topeka, Kan.	Bot. gr.	911 Scott-p
A. B., Washburn, 1913, A. M., 1916.			
Preston, Flora May	Palo Alto	Hist. gr.	34 Roble
A. B., Stanford, 1917.			
Price, Melvin M.	Buffalo, N. Y.	PreL. 39	Delta Kappa Ep.
Price, Verona Violet	Palo Alto	Econ. 71	602 Webster-p
Prior, Frank Oscar	Escondido	M. E. 72	332 Encina
Pritchard, Walter Ferris	Colton	Phyl.-Med. 116	121 Encina
Proctor, William Martin	Los Altos	Educ. gr.	Los Altos
A. B., Whitman, 1901, A. M., 1906; A. M., Stanford, 1916.			
Provis, Ethel	Grass Valley	Engl. gr.	Sigma Kappa
A. B., College of Pacific, 1916.			
Pruett, Harry Jeroam	Fresno	Med.gr.	S.F.Hospital,S.F.-sf
A. B., Stanford, 1912.			
Purdy, Donald F.	Dawson, Y. T., Can.	M. E. 73	223 Encina
Putnam, Dorothy	Gifford, Wash.	Hist. gr.	27 Roble
A. B., Stanford, 1916.			
Quayle, Ernest Harrison	Rea, Ida.	Engl. 13	269 Addison
Quinby, James Abram	San Jose	Law 87	35 Encina
Radcliffe, Thomas Drew	Ridgway, Pa.	Geol. 14	22 Lasuen
Rainey, Garnet Cecil	Los Angeles	Econ. 106	114 Encina
Rakestraw, Norris Watson	Los Angeles	Chem. gr.	219 Encina
A. B., Stanford, 1916.			
Ramsey, Bessie Louise	Billings, Mont.	Econ. 76	62 Roble
[1]Ramsey, Richard Craig	Stanford Univ.	Econ. 8	20 Lasuen
Rand, Gerald S.	Vancouver, B. C.	Econ. 40	132 Encina
Randall, Charles Edgar, Jr.	San Jose	Econ. 14	145 N. 5th, S. J.-sj
[1]Randau, Carl Albert	Los Angeles	Econ. 44	930 Scott
Randau, Clemens J.	Los Angeles	Econ. 82	930 Scott
Rankin, Ernest Scouller	Los Altos	PreL. 11	Los Altos-l
[1]Rathbun, Dwight S.	Los Angeles	Econ. 35	Sigma Nu
Rayon, Margaret	Oakland	Econ. 9	Xasmin House
Reagan, William Nilson	Long Beach	PreL. 37	Chi Psi
[1]Reardon,FrederickJ.	Guanajuato,Mex.	Geol. sp. 26	Theta Xi
Redwine, Clyde C.	Mountain View	Hist. 61	MountainView-mv
Redwine, Wendell Earle	Riverside	PreL. 41	504 Encina

Reeher, Max Moore	Forest Grove, Ore.	Ent. †9	269 Addison-p
[2]Reeves, Frank W.	Wichita Falls, Tex.	Geol. gr.	WichitaFalls,Tex.
A. B., Stanford, 1916.			
Rehm, Leonard Joseph	Sonora	Econ. 43	410 Encina
Reillac, Emile	Oakland	PreL. 45	18 Alvarado
Reilly, Hubert Bernard	Portland, Ore.	Chem. 71	502 Encina
Reinke, Benjamin C.	San Francisco	Phyl. 45	333 Waverley-p
[2]Remington,ArthurE.	Watertown,N.Y.	Geol. gr.	559 Cowper-p
A. B., Stanford, 1913.			
Remington, Robert Hiram	Palo Alto	C. E. 65	801 Waverley-p
Rethwilm, LarruliAnna	St. Louis, Mo.	Med. gr.	2321Calif.,S.F.-sf
A. B., Washington (St. Louis), 1913.			
Reyburn, Ellna	Mountain View	Hist. 45	MountainView-mv
[2]de los Reyes, Anacleto	Capiz, Capiz, P. I.	PreL. †	563 Homer-p
Reynolds, Clark Charles	Exeter	PreL. 40	Beta Theta Pi
Reynolds, Coralie M.	Saratoga	Ed.-G.A.91	623Middlefield-p
[1]Reynolds, Florence E.	Upper Lake	Hist. gr.	10 Roble
A. B., Stanford, 1913.			
Reynolds, Jere Thomas	Los Angeles	Law 70	Kappa Alpha
[2]Reynolds, Lloyd Robinson	Upper Lake	Med. gr.	2402Calif.,S.F.-sf
A. B., Stanford, 1915.			
Rice, Justus Bulkley	St. Louis, Mo.	PreL. 8	135 Encina
Rich, Willis Horton	Lancaster	Zool. gr.	Univ. Park
A. B., Stanford, 1909.			
Richards, Roy Lee	Prescott, Ariz.	Econ. 74	530 Encina
Richardson,WilloughbyP.	Portland,Or.	Phyl.-Med.107	AlvaradoCb.
[1]Richey, Frank Herbert	Merced	Law gr.	Beta Theta Pi
A. B., Stanford, 1913, J. D., 1917.			
Richter, Margaret Rose	Los Angeles	Engl. gr.	15 Madrono
A. B., Stanford, 1917.			
[2]Ridder, Harold Ferdinand	Long Beach	M. E. 77	405 Encina
Rifenberick, William L.	Menlo Park	M. E. gr.	Menlo Park-p.a.
A. B., Stanford, 1917.			
Righter, Cornelius Erwin	Campbell	Hist. 43	348 Encina
Righter, Floyd Lester	South Pasadena	Chem. 92	536 Encina
Riley, Thelma Marie	Colton	Hist. 76	Alpha Phi
[1]Risling, Marion Jay	Palo Alto	Ed.-G. A.	935 Webster-p
Robbins, Albert C., Jr.	Los Angeles	PreL. 43	Delta Upsilon
Robbins, Donald Thorley	Los Angeles	M. E. 49	AlphaTauOmega
Robbins, George Percival	Redding	Geol. 10	353 Lytton-p
Robbins, Wesley E.	Portland, Ore.	Engl. 72	321 Encina
[2]Roberts, Holly Helen	Los Angeles	Fr.	11 Madrono

[2]Roberts, Marguerite Lennis	LosAngeles	Fr.	Madrono
Roberts, Perry Buchanan, Jr.	Palo Alto	M. E. 48	1221 Waverley-p
Roberts, Weymouth M.	Redlands	PreL. sp. 52	Phi Kappa Psi
Robinson,BernardB.	GregsonHotSps,Mon	Law †43	513 Encina
Robinson, Geroid	Miami, Ariz.	Hist. 84	527 Encina
Robinson, Hester Douglas	Trabuco	Engl. 83	28 Roble
Robinson, John H., Jr.	Prescott, Ariz.	M. E. 12	344 Encina
Rochet, Carl Franz	St. Paul, Minn.	Law †11	236 Encina
Rochfort, Marie Caroline	San Anselmo	Hist. †11	AlphaOmicron Pi
Rockwell, John	Hubbard, Neb.	Econ. 61	375 Hawthorne-p
[1]Rodgers, William Reid	San Francisco	Econ. †	Delta Kappa Ep.
Rogers, Bogart	Los Angeles	PreL. 47	Kappa Sigma
[2]Rogers, Charles Corbly	Kerman	Econ.	11 Salvatierra
Rogers, Charles Henry	Portland, Ore.	Phyl. †15	431 Kipling-p
Rogers, Frederick Rand	San Jose	Phyl. 50	Delta Upsilon
Rogers, Harold P.	Forest Grove, Ore.	C. E. 72	205 Encina
Rogers, Hattie Ethelyn A. B., College of Pacific, 1909.	San Jose	Engl.gr.	117Lenzen,S.J.-sj
Rogers, Leslie Charles	Ventura	Law 105	Phi Kappa Sigma
Rogers, Marion Llewellyn	Long Beach	Econ. 9	5 Roble
Rogers, Robert Greene	San Jose	Phyl. 11	26 Encina
Rohrback, Daniel William	Watsonville	M. E. 131	233 Encina
Roll, Ella Louise	Santa Clara	Educ.113	1129Frnkln,SC-sc
Roney, Guy Joseph	Placentia	Hist. 106	Kappa Sigma
Roome, Mildred Florence	Los Angeles	Span. 61	Alpha Phi
Rose,FranklinOrth	Winnipeg,Man.,Can.	C. E. sp. 99	Sigma Nu
[1]Rosenheim, Ethel B. S., Chicago, 1914.	Chicago, Ill.	Med. gr.	Roble
[2]Rosenthal, Ethelyn May	San Francisco	Fr.	Madrono Annex
Ross, Delta Marie A. B., California, 1916.	San Bernardino	Med.gr.	1915Fillmore,SF-sf
Ross, John Stanley	Palo Alto	Geol. 114	561 Middlefield-p
[1]Ross, Norman de Mille	Portland, Ore.	PreL. 5	521 Encina
Ross,W.HerrmannG.	Minneapolis,Minn.	C. E. 104	Encina
Rossiter, Grace	Portland, Ore.	Ger. 68	KappaAlphaTheta
Roth, Marian Helen	Los Angeles	Psych. 15	5 Roble
[2]Rouiller, Marcelle Henriette A. B., Stanford, 1915.	Palo Alto	Fr. gr.	431 Channing-p
Rouse, Marshall K.	Mankato, Minn.	Chem. 50	65 Encina
Roush, Lucile Bertha	Stanford Univ.	Bot. 73	Cedro Cottage
[1]Roy, David G.	San Jose	Law sp. 32	116 Encina

Royden, George Taylor	San Mateo	M. E. 117	San Mateo-sm
Rugg, Ethel Dickinson	Berkeley	Fr. 75	Chi Omega
Russ, Glenn Allen	Carlotta	Engl. 11	149 Encina
Russell, Dennison A.	Palo Alto	Phil. 102	1325 Cowper-p
Russell, Elizabeth	Kansas City, Mo.	Math. gr.	12 Roble
A. B., Stanford, 1917.			
Russell, John Henry	Los Angeles	Law 110	Phi Delta Theta
Russell, William Otis	Los Angeles	Law 71	Kappa Sigma
Ryan, Marguerite California	San Jose	Hist. 87	56 Roble
[1]Ryon, Harrison John	Charles City, Ia.	Law gr.	Sigma Chi
A. B., Stanford, 1915.			
[1]Sakuma, Henry Fumiya	Tokio, Japan	M. E. 160	1400 Waverley-p
A. B., Stanford, 1917.			
Samis, Milton Francis	Greenfield	Econ. sp. 11	Theta Delta Chi
Sample, Fillmore Collins	Fresno	Phyl. 74	Sigma Alpha Ep.
Sampson, Joseph A.	San Francisco	Med. gr.	245 Ramona-p
B. S., California, 1910.			
Sanborn, Frederick William	Redlands	PreL. 41	145 Encina
Sanborn, Lewis Hampton	Palo Alto	Phyl. 46	430 Homer-p
[1]Sanborn, Maury Holland	Pasadena	Phyl. 64	Zeta Psi
Sanden, Eugene Stuart	Helena, Mont.	Law 78	532 Encina
Sanford, Laura Maud	San Francisco	Fr. 104	Delta Delta Delta
Sappington, Clarence Olds	Berkeley	Med. gr.	2102 Calif., S. F.-sf
A. B., Whitman, 1911.			
Sargent, Edward More	San Francisco	M. E. 11	352 Encina
[2]Saunders, Stewart Acers	Emmetsburg, Ia.	PreL. 39	Delta Kappa Ep.
[1]Sawtelle, James Mhoon	Tucson, Ariz.	Law 57	Kappa Sigma
Say, Harry Leslie	Parlier	Law 68	525 Encina
Sayre, Crystal	Tulare	Math. 102	Chi Omega
Sayre, Harold H.	Calgary, Canada	PreL. 18	Alpha Tau Omega
Schaufelberger, Wm. M.	Hastings, Neb.	Chem. 85	330 Encina
[1]Scheeline, Claire Jeanette	Menlo Park	Phil.	Menlo Park-mp
Schein, Sidney	San Jose	Chem. 83	347 Encina
Schellbach, Mabel Louise	San Jose	Ger. gr.	Sigma Kappa
A. B., Stanford, 1916.			
Schellenbach, Gerald H.	Los Angeles	M. E. 15	Zeta Psi
Schick, Herbert Mervin	San Mateo	M. E. 14	San Mateo-sm
Schilling, Dorothy Cecelia	Palo Alto	Engl. 11	551 Lytton-p
[1]Schilling, Marjorie Lucille	Palo Alto	Law 98	551 Lytton-p
Schlesinger, Lee	San Francisco	Econ. 63	Sigma Nu
Schmitz, Victorine Annette	Los Angeles	Ger. 84	31 Roble

Schnell, Eugene Andrew A. B., Stanford, 1917.	Mayfield	Ed.-G.A. gr.	341Col.,M-m
Schnetzler, Stanley S.	BeaverDam,Wis.	Law 111	314RamonaBldg.-p
Schnier, Jack Preston	San Francisco	C. E. 9	650 Waverley-p
[1]Schofield, Martha Nickerson A. B., Stanford, 1915.	Palo Alto	Educ. gr.	446 Forest-p
Scholz, Carl Eugene	Campbell	M. E. 114	128 Encina
[2]Schroeder, Mona Raine	Sacramento	Econ.	Madrono
Schulz, Nellie Gertrude	Porterville	Econ. 33	21 Roble
Schulze, Laclair Davidson A. B., California, 1915.	Oceanside	Law gr.	563 Encina
Schwartz, Gustav Sutro	San Francisco	Econ. 14	429 Encina
Schwarzenbek,FrancisX.	SanFrancisco	Geol. 81	336 Encina
Scott, Caleb Emlen	San Mateo	Bot. 102	201 Encina
Scott, Clyde H.	Santa Barbara	C. E. 105	316 Encina
Scott, Francis M., Jr.	N.Yakima,Wash.	PreL. 9	Theta Delta Chi
Scott, Hamlet Woodburn	Oakland	PreL. 30	Alpha Delta Phi
Scott, Shirley Edward A. B., Illinois, 1916.	Twin Falls, Ida.	Law gr.	College Terrace
Scovel, George Kenneth A. B., Stanford, 1916.	Chadron, Neb.	Law gr.	228 Encina
Scudder, Kathreen Virginia	Palo Alto	Greek 85	918 Cowper-p
Searcy, Ruth Isabelle	Durango, Colo.	Engl. 15	9 Roble
Sears, Edward Albert, Jr.	San Diego	PreL. 33	Phi Delta Theta
Secker, Georgia Pearl	Fresno	Lat. 76	437 Kipling-p
[2]Sedgwick,JohnHayden	Newcastle,Wyo.	Econ.	660 Waverley
Seely, Claire Randolph	Medford, Ore.	Econ. 11	Phi Kappa Sigma
Seemann, Carmen A.	Santa Ana	Ger. 9	Gamma Phi Beta
Seitz, Roland Peter	Alameda	Phyl. †11	92 Encina
Sellards, John A. A. B., Illinois, 1912; A. M., Stanford, 1916.	Champaign, Ill.	Fr. gr.	25 Salvatierra
Semino, Angelo	Mountain View	M.E.11	MountainView-mv
Senneff,GertrudeWinifred	LosAngeles	Fr. 39	Delta Delta Delta
[1]Sessions, Herbert Fiske	Portland, Ore.	Geol. 35	18 Alvarado
[1]Sevier, Donald Bullock	Eureka	M. E. 12	4 Salvatierra
Sewall, Russell W.	Portland, Ore.	PreL. 13	Chi Psi
[1]Seymour, Donald Irving A. B., Stanford, 1915.	Palo Alto	C. E. gr.	828 Cowper-p
Seymour, Doris Margaret	Palo Alto	Engl. 74	828 Cowper-p
Shamberger, John Philip	Payette, Ida.	Econ. 43	21 Encina
Sharp, Helen Elizabeth	Atherton	Phyl. 12	Redwood-r

Shaw, Elton Sutherland	San Jose	M. E. 11	269 S. 16th, S. J.-sj
Shedd, Margaret Cochran	Los Angeles	Econ. 17	22 Roble
[1]Sheedy, Frank Ainsworth	Los Angeles	Phyl. 25	Zeta Psi
Sheldon, Katherine Anna	Palo Alto	Engl. 108	851 University-p
[1]Sheldon, Virgil Lee A. H.	Berkeley	Law 72	Chi Psi
[2]Sheldon, Willard Hooker	Palo Alto	PreL.	851 University-p
[2]Shelton, Bob Grandfield	Los Angeles	Hist. 60	Pi Beta Phi
Shelton, Leigh Claiborne	Los Angeles	Hist. 105	Pi Beta Phi
Shepardson, Dwight Emerson	Fullerton	Phyl.-Med. 98	121 Encina
Shepherd, Harold	Paris, Ida.	PreL. 54	Veblen Cottage
Sherer, Gertrude R. B. L., Smith, 1901.	Worcester, Mass.	Engl. gr.	7 Salvatierra
Sherman, Richard Wade	Palo Alto	Geol. 30	427 Webster-p
Sherwin, Emery Downing	San Diego	C. E. 107	Kappa Alpha
[1]Shields, George C.	Mt. Vernon, Wash.	PreL. 35	18 Alvarado
[2]Shiels, William Charles Ed.	San Francisco	PreL.	Phi Delta Theta
Shippy, Frank Ambrose	Palo Alto	Hist. 10	910 Ramona-p
[1]Shipway, Leslie Scott	San Jose	Econ. 112	67 S. 20th, S.J.-sj
Shlaudeman, Karl Whitman	Pasadena	PreL. 14	Chi Psi
[2]Show, Joseph Henry	Palo Alto	M. E. 14	353 Melville-p
Shriver, Melvin H.	Eureka, Utah	Econ. 38	Theta Xi
Shultis, Arthur	Greeley, Colo.	Chem. 16	412 Cowper-p
[1]Shutz, Benjamin Lepman	Jerome, Ariz.	Phyl. 3	17 Salvatierra
Sias, Donald	Corona	Econ. 36	Phi Kappa Sigma
[1]Siemon, Manning	Ontario	Educ. †	405 Emerson
[1]Simmons, Glen Dewitt	Medford, Ore.	Hist. 6	2 Salvatierra
Simon, Dorothy Janet A. B., Stanford, 1916.	Butte, Mont.	Hist. gr.	Sigma Kappa
Simonds, Sarah Louise A. B., Stanford, 1916.	Los Angeles	Med. gr.	2321 Sacto., S.F.-sf
Simpson, Beverly	San Francisco	Phyl. 42	227 Encina
Simpson, Carolyn Elen	Palo Alto	Engl. 105	Chi Omega
Simpson, Helen McDougall	San Jose	Ed.-G.A.77	142 N. 3d, S.J.-sj
Single, Carroll John A. B., Stanford, 1917.	Stockton	Law gr.	Zeta Psi
Skeele, Franklin Bosworth	Los Angeles	Educ. †15	930 Scott
Skelton, Leland Rice	Okmulgee, Okla.	Phys. 99	712 Waverley-p
Skinner, Harvey Herbert	Burlingame	Ent. 75	Sigma Chi
[1]Slater, Helen Mar	Deer Park, Wash.	Ger.	532 Homer-p
Slater, Herbert N.	Deer Park, Wash.	Ger. 60	532 Homer-p
Slater, Homer H.	Deer Park, Wash.	PreL. 2	532 Homer-p

[2]Slocum, LeCount Haynes	Palo Alto	Chem. 33	803 Cowper-p
Sloman, Frank Henry	San Francisco	Phyl. 9	Kappa Alpha
Sloss, Leon, Jr.	San Francisco	Econ. 8	429 Encina
Small, Otis Danforth	Cupertino	Chem. 56	Cupertino-c
[2]Smalley, William Denney	Pasadena	Law 22	Phi Gamma Delta
Smith, Andrew Mackay	Hollywood	M. E. 106	Kappa Sigma
Smith, Carl Victor	Oakland	Econ. †15	405 Emerson-p
Smith, David Mackusick	Long Beach	PreL. 47	Delta Chi
Smith, Earl Martin	Richfield	Econ. 77	545 Bryant-p
Smith, Emily Violet	Los Altos	Chem.45	R.D.18,Mt.V.-mv
Smith, Forster Rand	Palo Alto	PreL. 15	1335 Cowper-p
[1]Smith, Gwendoline	Portland, Ore.	Psych. 120	Alpha Phi
A. B., Stanford, 1917.			
Smith, Harrison Painter	Los Angeles	Chem. 57	523 Encina
Smith, Jacob Dewey	Winchester, Ky.	Geol.	4 Salvatierra
Smith, Jessie Edna	Redwood City	Fr. gr.	Redwood City-r
A. B., Stanford, 1916.			
Smith, John Harold	Rochester, N. Y.	PreL. 15	25 Alvarado
Smith, Martha Emily	Los Angeles	Engl. 14	72 Roble
Smith, Melancthon, Jr.	Los Angeles	Econ. 46	Phi Kappa Sigma
Smith, Rachel Bell Babcock	Newhall	Zool. 10	22 Roble
Smith, Roderick Arbuckle	Seattle, Wash.	Law 62	537 Hamilton-p
Smith, Talmage Laughner	Irwin, Pa.	Law gr.	Stanford Union
A. B., Stanford, 1915.			
Smurr, Ernest Randal	Arroyo Grande	Hist. 15	37 Encina
[1]Snell, Joel Andrew	Palo Alto	Educ. gr.	202 Bryant-p
A. B., Stanford, 1901, A. M., 1915.			
Snell, John	Cleveland, O.	Fr. 13	Phi Gamma Delta
Snell, Kenneth Alfred	San Francisco	M. E. 78	202 Bryant-p
[1]Snook, Walter B.	Berkeley	Phyl. 7	Sigma Nu
Snyder, Howard Ogier	Denver, Colo.	M. E. 69	502 Encina
Sorensen, Einar Ralph	San Jose	Educ. †16	404 Encina
[1]Soule, Madeleine	Alhambra	Engl. 118	12 Alvarado
[1]Spalding, Helen Godfrey	Los Angeles	Engl. 122	25 Roble
A. B., Stanford, 1917.			
[2]Sparks, James Alsworth	Sierra Madre	PreL.	Encina
Sparling, Edward James, Jr.	Hollister	PreL. 9	146 Pope-p
[1]Speers, Roland Root	Santa Monica	Phyl. 47	Sigma Nu
[1]Spencer, Lawrence Milton	Fellows	Geol. 58	Phi Kappa Psi
Spengeman, William E.	Santa Clara	M. E. 48	226 Encina
Spickard, Harold E.	Des Moines, Ia.	Geol. †15	146 Encina

Sprague, Leonard Tower	Grafton, N.D.	Econ. 95	Theta Delta Chi
Sprott, Mary Esther	Porterville	Hist. 13	Madrono
[1]Spurrier, Howard Allan	Paso Robles	Law 69	Palo Alto Hotel
Squire, Ruth Hortense	Palo Alto	Engl. 77	900 University-p
Squires, Anita Marian	Palo Alto	Math. 15	627 Gilman-p
[1]Stagg, Ira James	Anaconda, Mont.	Law 38	216 Emerson
Stamp, Wade Moore	Long Beach	C. E. 22	402 Encina
[1]Staniford, Warren Paul A. B., Stanford, 1916.	Fresno	Econ. gr.	Sigma Chi
[2]Stanley, Herbert Mark	Palo Alto	Geol. 88	269 Hawthorne-p
Stark, Anna Vaal	Palo Alto	Ed.-G.A.110	1020Ramona-p
Stark, Marguerite Dare	Palo Alto	Engl. 115	1020 Ramona-p
Starkey, Harold B.	San Diego	PreL. 45	Chi Psi
Stauf, Ida A. B., Stanford, 1910; A. M., 1912.	Palo Alto	Ger. gr.	1029 Ramona-p
Stearn, Joseph Harold	Los Angeles	C. E. 68	AlphaTauOmega
Stearn, Noel Hudson	St. Louis, Mo.	Engl. 97	326 Encina
Stearns, Leland Church	Oakland	M. E. 114	Sigma Chi
Steele, Arthur Edward	San Francisco	Law sp. 66	Kappa Alpha
Steinbeck, Karl G.	Hollister	M. E. 73	419 Encina
Steinberger, Grace H.	Redwood City	Ger. 107	Sigma Kappa
Steininger, Alma Helen	Palo Alto	Ed.-G. A. 104	Alpha Phi
Steiwer, William H.	Portland, Ore.	PreL. 42	Zeta Psi
Stellar, Arnold Thurlow	Eagle Rock	Law 104	Delta Chi
Stelling, Emma Gladys	San Jose	Ed.G.A.13	104S.13th,S.J.-sj
Stevens, Blaine L.	Palo Alto	Ent. 96	926 Cowper-p
Stevens, Harold R.	Victoria, B. C.	Engl. 75	25 Encina
Stevens, John Egbert	Afton	Med. gr.	1660Bush,S.F.-sf
Stevens, Lloyd C. A. B., Stanford, 1915.	Graceville, Minn.	Law gr.	Phi Delta Theta
Stevens, Russell Brennan	Healdsburg	Hist. 38	405 Encina
[2]Stever, Carl William	San Francisco	Econ. 15	Phi Kappa Psi
Stevick, Mary Ellen	San Francisco	Econ.118	KappaKappaGam.
[1]Stevick, Nana	San Francisco	Engl. 79	KappaKappaGam.
Stewart, Geneva Grace	Stockton	Econ. 104	Gamma Phi Beta
Stewart, Gwendolyn A. B., Stanford, 1900.	Santa Barbara	Med.gr.	1344Jackson,S.F.-sf
Stewart, Hugh	Escondido	M. E. 55	332 Encina
Stewart, John Speaker	Los Angeles	Econ. 59	333 Waverley-p
Stewart, John Thomas	Live Oak	Law 80	564 Encina
Stewart, Marian Berniece	Stockton	Engl. 6	Madrono Annex

Stewart, Wayne Casey	Portland, Ore.	PreL. 10	Phi Kappa Psi
Stewart, William L., Jr.	Lamanda Park	Chem. 8	Beta Theta Pi
Stocklmeier, Adele Irmler	Cupertino	Ed.-G.A. 86	Cupertino-c
Stocklmeier, Alfonso J.	Cupertino	C. E. 41	Cupertino-c
[1]Stockwell, Nathaniel Y.	Los Angeles	M. E. 6	Beta Theta Pi
Stoddard, Jeanne	Merced	Hist. 76	Alpha Omicron Pi
Stone, Laura Claire	Santa Barbara	Educ. 129	33 Roble
Stone, Mabel Annie A. B., Wellesley, 1907, A. M., 1912.	Waltham, Mass.	Bot. gr.	7 Salvatierra
Stoneman, Ethel T. A. B., West Australia, 1916.	Perth, W. Australia	Educ. gr.	361 Channing-p
Storck, John P. W.	Ft.Worden,Wash.	Greek 49	135 Encina
Storm, Hans Otto	Imperial	M. E. 83	166 Bryant-p
Stouffer, Jay Harold	Hoquiam, Wash.	Phyl. 15	210 Encina
Strain, Edward J., Jr.	Marysville	PreL. 8	Phi Delta Theta
Streichan, Paul Herman A. B., California, 1915.	Vallejo	Med. gr.	2095Bush,S.F.-sf
Strobel, Carolus Ferchen	Oakland	PreL. 43	Phi Kappa Sigma
[1]Strong, Otis T. I.	Calgary, Canada	Econ. 3	Alpha Tau Omega
Stuart, Annette	Mountain View	Zool. 91	MountainView-mv
[2]Stuart, Archer Bell A. B., Stanford, 1916.	Palo Alto	E. E. gr.	621 Gilman-p
Stuart, Irene A. B., California, 1916.	Los Angeles	Engl. gr.	26 Madrono
Sturgeon, James Leonard	Monrovia	Econ. 37	208 Encina
Sturgeon, John A. H.	Monrovia	PreL. 11	539 Encina
Suck, Leo Edward	Los Angeles	C. E. 45	660 Waverley-p
[1]Sudden, Anita Elenora	Ventura	Psych. 99	Chi Omega
[1]Sullivan, Charles Jerauld	Los Angeles	Econ. 27	Delta Tau Delta
Sullivan, Owen Malachi	Portland, Ore.	PreL. 47	Phi Gamma Delta
Sumioka, Shuichi	Hiroshima-Ken, Jap.	M. E. sp. †24	Japanese Club
[1]Summerfield, Vernon D.	Reno, Nev.	PreL. 28	83 Encina
Supple, Albert James A. B., Stanford, 1916.	South Pasadena	Med. gr.	2102 Calif., S.F.-sf
Supple, Frederic E.	South Pasadena	Law 114	327 Encina
Suttle, Henry McKie	Viroqua, Wis.	Phyl. 13	345 Hamilton-p
Suydam, Clinton Hamilton	Los Gatos	M. E. 82	Los Gatos-lg
[1]Swan, Charles Leslie	Modesto	Econ.	Sigma Chi
Swarts, Clifton Ray	Hermosa Beach	Geol. 49	Alpha Tau Omega
Sweeney, John Paul	Phoenix, Ariz.	Phyl. 48	540 Encina
[1]Sweeney, Luella A. B., Stanford, 1917.	Tell City, Ind.	Hist. 123	19 Madrono

Sweet, Elaine	San Diego	Hist. 16	27 Roble
Swendsen, Harold G.	SaltLakeCity,Ut.	Econ. 10	Sigma Chi
[2]Swett, Harold David	Palo Alto	Econ.	1000 Forest-p
Swett, Wilber Frank	Palo Alto	Phyl.-Med.100	1000Forest-p
Swift, Thomas Brewster, Jr.	Martinez	M. E. 15	431 Encina
Swigart, Theodore Earl	Oakland	C. E. gr.	234 Encina
A. B., Stanford, 1917.			
Swingle, E. Margaret	Long Beach	Span. 102	24 Roble
Sykes, William Francis	Peoria, Ill.	Chem. 15	251 Emerson
Sylva, Joseph L. M.	Honolulu, T. H.	Law 95	524 Encina
Taber, Anna Florine	Palo Alto	Fr. 9	820 Cowper-p
Taber, Louise Everett	San Francisco	Med. gr.	2915 Calif.,S.F.-sf
B. S., California, 1914.			
[2]Taff, Charles Leverett	Palo Alto	Phyl.	628 Cowper-p
Taff, Mary Willis	Palo Alto	Hist. 15	628 Cowper-p
Taft, Alan C.	Arcadia, Wis.	Engl. 15	201 Encina
Takahashi, Matsuta	Montebello	Phyl. 41	Japanese Club
Takanashi, Taka	Stanford Univ.	Engl. 103	27 Salvatierra
Takata, Toshio	San Francisco	M. E. 92	Japanese Club
Takeyama, George Y.	San Francisco	Phyl. †8	Japanese Club
Talavera, Florencio	Iloilo, P. I.	Phyl. 22	705 Cowper-p
Talboy, Irwin Whitfield	Palo Alto	Engl. 90	311 Middlefield-p
Tauzer, Clarence Jaurgen	Paso Robles	Econ. 15	303 Encina
Taylor, Agnes Stanford	San Francisco	Engl. 79	11 Roble
Taylor, Frank J.	Los Angeles	Engl. 71	428 Encina
Taylor, George Harvey	Fresno	C. E. 107	247 Encina
Taylor, Gladys Lathrop	Santa Monica	Educ. 127	14 Madrono
Taylor,JamesE.,Jr.	Hughton,Sask.,Can.	Econ. 12	Alpha Tau Omega
Taylor, John Joseph	San Jose	Law †69	204 Encina
Taylor, Palmer W.	Santa Monica	M. E. 33	Sigma Nu
Taylor, Quimby Whitley	Palo Alto	Chem. 13	72 Encina
Taylor, Ruth Dena	Los Angeles	Engl. 52	Delta Delta Delta
[1]Taylor, Trenton Hurd	Woodland	Econ. 41	25 Salvatierra
Tedford, Malcolm Edward	Santa Ana	Law 99	Delta Upsilon
Teeter, Arthur Lewis	Monticello, Ind.	Med. gr.	2102 Calif., S.F.-sf
A. B., Indiana, 1911.			
Tegner, William Evers	Laramie, Wyo.	Law 88	541 Encina
Tehan, John Stevenson	San Bruno	Econ. 13	San Bruno-sb
Teitsworth, Clark Salem	Los Angeles	Chem. 49	423 Encina
Tell, David Eugene	Turlock	M. E. sp. 11	539 Encina
Templeton, John Wesley	Modesto	Chem. 100	234 Encina

Templeton, Robert Lyman	Modesto	PreL. 45	315 Encina
[2]Templeton, Ruric Ruskin	Modesto	Geol. 92	122 Encina
Templin, Ernest Hall	Rupert, Ida.	Lat. 15	649 Lytton-p
[2]Terman, Frederick E.	Stanford Univ.	M. E.	9 Dolores
Thalheimer, Ulrich S.	Phoenix, Ariz.	M. E. 70	215 Encina
[1]Thayer, Rufus Gerard	San Francisco	PreL. 41	326 Addison
Thayer, Wheeler Hall	San Francisco	Geol. 9	Zeta Psi
Therkelsen, Mary D.	Portland, Ore.	Fr. 51	Kappa Kappa Gam.
Thomas, Frank Newton, Jr.	Pasadena	Econ. 14	26 Encina
Thomas, Gerald C.	Imperial	PreL. 48	166 Bryant-p
[1]Thomas, Lavinia	San Francisco	Engl. †14	57 Roble
Thomas, Zita Gertrude	Fresno	Fr. †12	30 Madrono
Thomason, Ira Leroy	Hollywood	Law 137	121 Encina
[2]Thompson, Agnes Salisbury	Palo Alto	Econ. gr.	481 Lytton-p
A. B., Washington, 1916.			
Thompson, Edith R.	Los Angeles	Chem. 105	17 Madrono
Thompson, John Robert G.	Pasadena	Law 65	Kappa Alpha
Thompson, Leonard R.	Everett, Wash.	Med. gr.	1236 Cowper-p
B. S., Washington, 1916.			
[1]Thompson, LeRoy A.	Arkansas City, Kan.	PreL. 4	Alvarado Hall
Thompson, Percy Vernon	Los Angeles	Phyl. 13	115 Encina
Thompson, William F.	Everett, Wash.	Zool. gr.	1236 Cowper-p
A. B., Stanford, 1911.			
Thrapp, Elbridge R.	Los Angeles	Law †66	Kappa Sigma
Tilden, Heber Voorman	San Francisco	Chem. 7	Phi Delta Theta
Tilton, Leslie Rowlee	Los Angeles	PreL. 12	Delta Chi
[1]Timby, Fred W.	Salt Lake City, Utah	M. E. 24	Phi Kappa Sigma
[1]Timmins, Claude Walter	Fresno	Econ. 117	Sigma Chi
Titus, Charles Hickman	Sacramento	Hist. 44	148 Encina
Toda, Harold Shotaro	Oakland	M. E. †32	Japanese Club
Tolman, Mary	Belfry, Mont.	Chem. 12	Alpha Phi
Tompkins, Bernice Brooks	San Jose	Hist. 114	Kap. Alpha Theta
Tompkins, Vivian Lee	San Jose	Hist. 44	395 N. 3d, S. J.-sj
Toole, Edwin Warren	Helena, Mont.	Law gr.	Theta Xi
Ph. B., Yale, 1914.			
Toole, Joseph Porter	Helena, Mont.	PreL. 16	Sigma Nu
Torrance, Lewis C., Jr.	Los Angeles	Phyl. 12	Sigma Alpha Epsilon
Tourtillott, Raymond R.	Lindsay	Geol. 45	207 Encina
Towle, Wilton Harold	Palo Alto	PreL. 47	911 Scott-p
Townley, Lucile	Stanford Univ.	Ger. 80	33 Salvatierra
Townley, Mary Isabel	Stanford Univ.	Econ. 13	33 Salvatierra

Townsend, Thomas Harold	San Jose	C. E. 118	Kappa Sigma
Townsley, Sidney Cliffton	Pueblo, Colo.	Chem. 56	350 Encina
Trace, Gertrude May A. B., Stanford, 1914.	San Jose	Psych. gr.	730 Univ., S.J.-sj
[1]Traphagen, Wilfred Oliver	Alameda	Econ. 47	4 Salvatierra
Treat, Mila Hakes Ph. B., Redlands, 1916.	Pasadena	Hist. gr.	Madrono
Tresidder, Donald Bernhard	Tipton, Ind.	Phyl. 66	13 Salvatierra
Triplett, Stanley Lloyd	Ceres	Econ. 13	College Terrace
Troeger, Richard Glen	Los Angeles	Hist. 49	125 Encina
[1]Trott, Garnet Emma Ph. B., Chicago, 1911; A. M., Stanford, 1916.	Keokuk, Ia.	Ger. gr.	132 S. 19th, S.J.-sj
Tuck, Joy Edwarda	Redlands	Psych. 108	48 Roble
[1]Tucker, Murray Eaton A. B., Stanford, 1917.	Denison, Tex.	Chem. 123	544 Encina
Tufts, John Marshall A. B., Stanford, 1916.	San Francisco	Med. gr.	16, 17th ave., S.F.-sf
Turley, Joseph Soll A. B., Stanford, 1917.	Palo Alto	Educ. gr.	543 Byron-p
Turner, Mildred Hahmann	Santa Rosa	Math. 77	25 Roble
Tuthill, Mary Van Wyck	San Jose	Fr. 9	87 S. 13th, S. J.-sj
Twohy, Philip Joseph	San Francisco	Econ. 96	Delta Kappa Ep.
Tyrrell, Clarence Ellis	Berkeley	Math. 36	333 Waverley-p
Uchizono, Tomosuke	Los Angeles	Chem. 7	Japanese Club
Uhl, Gretchen Elisabeth	Monrovia	Ger. 111	Delta Delta Delta
Ulrey, Dayton A. B., Indiana, 1911, A. M., 1912.	N. Manchester, Ind.	Phys. gr.	Ravenswood
Unangst, Edwin Walter A. B., Stanford, 1917.	San Luis Obispo	Engl. gr.	421 Encina
Upp, Daniel C., Jr.	Dawson, Y. T., Can.	Law 67	424 Encina
Upton, Clark Camp, Jr.	Spokane, Wash.	PreL. 12	42 Encina
Vanderburgh, Chester Marion A. B., Stanford, 1915.	Madera	Med. gr.	2102 Calif., S.F.-sf
Vandervort, Charles T.	Santa Cruz	Law 101	144 Encina
Van der Wolk, Emil W.	Springfield, Mass.	C. E. 42	Kappa Alpha
Van Every, Dale Byron	Colton	Law 63	302 Encina
Van Gorden, Horace Jerome	Palo Alto	Econ. 80	535 Everett-p
Van Pelt, Reuben G.	Los Angeles	Chem. 81	554 Hawthorne-p
Vaudoit, Paul Louis	San Luis Obispo	Phyl. 63	415 Encina
Veale, Mortimer Belshaw	Martinez	Law 84	131 Encina
[1]Vehrs, George E.	La Grande, Ore.	Phyl.	512 Lytton-p
[2]Vickery, Frederick Paul B. S., California, 1905.	Palo Alto	Geol. gr.	367 Forest-p

Vickery, Robert Kingston A. B., Stanford, 1916.	Saratoga	Ent. gr.	317 Encina
Vietor, Lynn Albert	Eureka	Chem. 13	Phi Kappa Sigma
Vincenz, Jean Lacey	Fresno	C. E. 79	412 Cowper-p
[2]Visel, Ruth Angele	Santa Ana	Hist. †	24 Alvarado
Voris, Ruth Irene	Long Beach	Ger. 13	Madrono Annex
Wagener, Willis Westlake	Ceres	Bot. 90	223 Cowper-p
Waite, Herbert Eugene, Jr.	Stockton	PreL. 35	Phi Gamma Delta
Waite, Howard Edgerly	Riverside	M. E. 109	123 Encina
Wakefield, Cecil Ray A. B., Stanford, 1916.	Fresno	Law gr.	22MayEllen,S.J.-sj
Walbridge, Thomas A.	Toledo, O.	Econ.111	309RamonaBldg.-p
Waldo, Herbert S.	Kalamazoo, Mich.	Engl. †36	18 Alvarado
Waldo, John Henderson	Pasadena	PreL. 48	AlphaTauOmega
Walker, Frank Fish	San Francisco	Law 65	334 Encina
[1]Walker, George M.	Stanford Univ.	Econ.	17 Salvatierra
Walker, Gladys Lucile	Monrovia	Engl. 102	Sigma Kappa
Wallace, Bruce	Palo Alto	Geol. 121	430 Forest-p
Wallace, James McOuat	Palo Alto	Law 107	483 Hawthorne-p
Walsh, Dorothy Leeds	San Mateo	Span.41	KappaAlphaTheta
[1]Walsh, Edwin Martin	Menlo Park	Phyl.-Med. †	MenloPk.-mp
Walter, Arthur	Satson, Wash.	Math. 62	529 Addison-p
Walther, Lyle Harris	Medford, Ore.	M. E. 12	Theta Xi
[1]Ward, Engelena Susan A. B., California, 1915.	Berkeley	Path.gr.	1392 Geary, S.F.-sf
[2]Ward, Frances C. P. B., Michigan State Normal College, 1904.	Mountain View	Lat. gr.	Mt. View-mv
[1]Ward,HaroldLee	OrchardLake,Mich.	Fr. 20	Alpha Delta Phi
Ware, John Sanddford	Durango, Colo.	M. E. 47	Encina
[1]Waring, Ethel Bushnell A. B., Illinois, 1908.	Oakland	Educ.gr.	1296,29th ave.,SF-sf
Wark, Thomas Leslie	Long Beach	Geol. 41	Beta Theta Pi
Warn, William Otto	Spokane, Wash.	Econ. 41	Phi Kappa Psi
Warnock, Archibald Wilson	Palo Alto	Zool. 72	781 Channing-p
Warren, Arthur Fulton	San Jose	Phyl. 44	245 S. 12th, S.J.-sj
Warren, Lansing	Los Angeles	Engl. 115	351 Encina
Wason, Thomas F.	Santa Paula	C. E. 102	450 Encina
Wass, Warren Herbert	Santa Barbara	C. E. 75	432 Encina
Waterman, Wilhelm H.	San Francisco	Engl. 90	Alpha Delta Phi
[1]Watson, Harold G.	Los Angeles	Econ. †34	Beta Theta Phi
Watson, Leslie James	Sunnyvale	C. E. 72	Sunnyvale-s

Watters, Louis Hilton	Santa Cruz	Phyl. 10	The Alexandria
Watts, Frank Albert	E. San Gabriel	C. E. 40	Theta Xi
Wayland, Charles Rucker	San Jose	PreL. 13	Phi Kappa Psi
[1]Weatherford, Harold L. A. B., Stanford, 1916.	Chicago, Ill.	Med. gr.	Encina
Weaver, Donald Kessler	La Porte, Ind.	Chem. 13	Phi Kappa Psi
Weaver, Landis Osburn	Fresno	PreL. 52	720 Waverley-p
Weber, Harold Davis	Los Angeles	Econ. 105	228 Encina
Webster, Beatrice M.	Los Angeles	Math. †44	17 Madrono
Wedekind, Richard Eldon	Chico	PreL. 38	224 Encina
Weeks, Foster William	Oakland	Econ. 48	134 Encina
Weeks, Pearl May A. B., Stanford, 1916.	South Pasadena	Phys. gr.	1830 Cowper
Weil, Alita	Sacramento	Ent. 31	Alpha Phi
Weiler, George O.	Victoria, B. C.	M. E. 23	Phi Kappa Psi
Welch, Josephine	Colusa	Law 75	Pi Beta Phi
Welch, Robert Johnson	Oakland	Law 93	Beta Theta Pi
Welker, Benjamin Lee, Jr.	San Diego	M. E. 35	51 Encina
Weller, Henry Seymour	Nashotah, Wis.	Fr. †13	305 Cowper-p
Wellington, Arthur Boole	Sacramento	C. E. 29	352 Encina
Wellman, Whittier Will	Los Altos	Engl. 13	853 Middlefield-p
Wells, Alice Colby	Hollywood	Econ. 44	Kappa Alpha Theta
Wells, Herbert S.	Haiku, Maui, T. H.	PreL. 13	501 Encina
Wells, Willard Bruce	Portland, Ore.	C. E. 10	Alpha Delta Phi
Wells, William Wellington	Hollywood	Bot. 8	145 Encina
Wemra, Seitarow	San Francisco	M. E. 101	Japanese Club
Wenzel, Robert Nicolas A. B., Stanford, 1916.	St. Louis, Mo.	Chem. gr.	219 Encina
West, Frank Gordon	Santa Ana	PreL. 39	244 Encina
West, Margaret Donaldson A. B., Occidental, 1916.	Pasadena	Engl. gr.	36 Madrono
West, Z. Bertrand, Jr.	Santa Ana	Law 95	122 Encina
Westbie, Nina Ann	Oakland	Engl. †12	Madrono Annex
[1]Westenhaver, Charles E.	Cottage Gr., Ore.	Law 72	Delta Chi
Westenhaver, Robert E.	Cottage Gr., Ore.	Law 69	Delta Chi
Westerman, Helen	Sutter Creek	Econ. 94	36 Roble
Westwick, Atwell G.	Santa Barbara	PreL. 55	509 Encina
Wetherby, Christine	Pasadena	Ger. 28	975 Hamilton-p
[1]Weyer, Fred William	Wallace, Ida.	Chem. †9	11 Salvatierra
Weymouth, Frank W. A. B., Stanford, 1909, A. M., 1911.	Stanford Univ.	Zool. gr.	11 Alvarado

Wharton, James Melvin	Portland, Ore.	Engl. 34	El Camino
Whealton, Rowland G.	Long Beach	Geol. 44	Kappa Alpha
Wheatly, Winston R.	Los Angeles	Law 78	Kappa Sigma
Wheeler, Charles Edward A. B., Stanford, 1916.	Milwaukee, Wis.	Geol. gr.	115 Encina
[1]Wheeler, Oliver Percival	Petaluma	Econ. 73	18 Alvarado
Whitaker, Wesley R. A. B., Stanford, 1915.	Oakland	Law gr.	447 Encina
White, Charles Eldon	Palo Alto	Chem. 49	604 Everett-p
White, Fred Ferrell A. B., Stanford, 1916.	Marion, Ill.	Law gr.	18 Alvarado
White, John BeVier	Selma	Phyl. 14	347 Alma-p
White, Lewis Edmund	Redding	Educ. 94	Theta Xi
White, Major A.	North Platte, Neb.	Phyl. 14	72 Encina
White, Minor	San Dimas	Engl. 10	Alvarado Hall
[1]Whitmer, Aaron A.	Portland, Ore.	PreL. 34	Zeta Psi
Whitney, George Henry	Stockton	M. E. 2	17 Salvatierra
[2]Whittlesey, Robin Adair	Paradise	Chem.	412 Cowper-p
Whittelsey, Stuart Gordon	San Diego	Econ. 13	Kappa Alpha
Wichman, Pauline Marie	Los Angeles	Econ. †10	25 Madrono
[1]Wickersham, Frederick A.	San Francisco	Econ. 3	Phi Delta Theta
Wickersham, Harry P.	Los Angeles	M. E. 13	Kappa Sigma
Wickersham, Zelda Louise	Palo Alto	Fr. 9	257 Webster-p
Widell, Berndt A.	Fort Keogh, Mont.	M. E. 107	447 Encina
Wilcox, Chester Arthur	Long Beach	PreL. 40	Chi Psi
[1]Wilcox, Lorene	Santa Cruz	Educ. 118	Gamma Phi Beta
[2]Wilcox, Robert William A. B., Stanford, 1913.	Delta, Colo.	Med. gr.	Lane Hosp., S.F.-sf
[1]Wiley, Harry Ronald	Porterville	Law sp. 9	Phi Gamma Delta
Wilke, John Howard	Los Angeles	Econ. 11	Beta Theta Pi
Wilkie, Laura Elizabeth	Truckee	Ger. 93	Alpha Omicron Pi
Wilkins, Earl Brander	San Francisco	Law 79	Phi Gamma Delta
Wilkins, Joseph Ralph A. B., Brigham Young, 1916.	Provo, Utah	Educ. gr.	515 Waverley-p
Wilkins, Marjorie S.	Des Moines, Ia.	Hist. 77	Delta Gamma
Wilkins, Raymond Gordon	San Jose	PreL. 12	Delta Chi
[1]Willard, Nancy Lee	Hollywood	Hist. 83	Kappa Alpha Theta
Willcox, John Frederick	Atherton	M. E. 13	Redwood-r
Williams, Alice Whitney	Los Angeles	Chem. 73	88 Roble
Williams, Buford A. B., Stanford, 1917.	Vinita, Okla.	Econ. gr.	123 Encina
Williams, Catherine	Los Angeles	Hist. 13	4 Roble

Williams, Ernest Elias	San Jose	Law 119	272 S. 12th, S. J.-sj
Williams, Fleta H.	Higginsville, Mo.	Chem. 86	324 Emerson-p
Williams, Paul Langdon	Los Angeles	Econ. 108	Alpha Delta Phi
Williams, Philip Samuel	Ontario	Chem. 49	1129 Cowper
Williams, Robert Tatman	Quincy, Ill.	Engl. 76	Alpha Delta Phi
Williams, William Lloyd	Danville	M. E. 13	10 Cabrillo
Williamson, Frederick W.	Hollywood	PreL. 53	Alpha Delta Phi
Williamson, Helen Lucile	Berkeley	Phyl.-Med. 105	34 Roble
Williamson, Joseph F.	Sebastopol	M. E. 77	978 S. 10th, S.J.-sj
Willimann, Edwin	Menlo Park	Engl. sp. 126	MenloPk.-mp
Willis, Cornelius G.	Stanford Univ.	M. E. 32	533 Encina
[2]Willis, Robin	Stanford Univ.	Econ.	5 Lasuen
Willoughby, Olive Mildred	San Jose	Zool. 46	360 S. 9th, S. J.-sj
Wilson, Arthur Francis	Hollister	C. E. 73	432 Encina
Wilson, Glenn William	MountainView	E.E.gr.	MountainView-mv
E. E., Minnesota, 1911.			
[2]Wilson, Guy C.	Winters	PreL.	303 Hamilton-p
Wilson, Paul R.	Coquille, Ore.	Law sp. 115	419 Encina
Winder, Louise	Los Angeles	Fr. 76	Delta Gamma
[1]Wingood, Elsie Katharine	Santa Ana	Span. 122	Sigma Kappa
A. B., Stanford, 1917.			
Winham, Edgar Snyder	Salinas	C. E. 38	Delta Upsilon
Winham, William Pitt Leroy	Salinas	C. E. 38	Delta Upsilon
Winters, Nove McC.	Quincy, Ill.	Law 64	Alvarado Hall
Winters, Victor De Witt	Quincy, Ill.	Law 67	Alvarado Hall
Wise, David Clarence	Carthage, Mo.	Chem. 74	68 Encina
Wise, James Dougan	Los Angeles	PreL. 16	22 Lasuen
[1]Wislizenus, Lucy Carvell	Los Angeles	Lat. 54	Delta Delta Delta
Witherbee, Harold Rhody	Los Angeles	Phil. 52	Kappa Sigma
[1]Withers, Grace Agnes	San Jose	Educ. 126	39 Roble
A. B., Stanford, 1917.			
Wohlford, Burnet Coleman	Escondido	Econ. 75	522 Encina
Woitishek, Alfred Joseph	Hollywood	Phyl. 11	Phi Kappa Sigma
Wolf, Leslie Milton	San Diego	Geol. gr.	Phi Kappa Psi
A. B., Stanford, 1917.			
[1]Wolff, Kenneth Lloyd	San Fernando	Bot. 40	660 Waverley-p
Wolford, Catlin	Portland, Ore.	Law 94	Beta Theta Pi
Wong, Shiu Kei	Canton, China	Econ. 47	415 Lytton-p
[1]Wood, Abbie Elvenia	Palo Alto	Econ. 67	349 Hamilton-p
Wood, Dorothy A.	San Francisco	Med.gr.	2401 Sacto., S.F.-sf
A. B., Stanford, 1915.			
Wood, Elizabeth Compton	Palo Alto	Econ. 72	349 Hamilton-p

Wood, Grace Mary	Mayfield	Fr. 107	Mayfield-m
Wood, James T., Jr.	White Sul. Spgs., Mont.	Geol. 66	Delta Upsilon
Wood, James Vincent	Pacific Grove	Law gr.	Phi Kappa Sigma
A. B., Stanford, 1916.			
Wood, Jessie Belle	Ceres	Engl. 102	56 Roble
Wood, Jessie Ida	Mayfield	Bot. gr.	Mayfield-m
A. B., Stanford, 1915, A. M., 1916.			
Wood, John Clarence	Santa Cruz	Econ. 111	245 Encina
Wood, William Farlin	Mayfield	M. E. 47	Mayfield-m
Woodward, Violette O.	Santa Clara	Engl. 71	1358 S. Clara, S. C.-sc
[2]Woolley, Albert Fred	San Jose	M. E.	135 Hollywood, S. J.-sj
[2]Wormser, Mary	San Francisco	Hist. gr.	980 Bush, S. F.-sf
A. B., Stanford, 1913.			
Wright, Carrie Della	Palo Alto	Ger. gr.	436 Lytton
A. B., Smith, 1910.			
[1]Wright, Charles W.	Vancouver, B. C.	Engl. gr.	332 Channing-p
A. B., Queens, 1915.			
Wright, Edward A.	Los Angeles	C. E. 32	18 Alvarado
Wright, Ernest Neall, Jr.	Pasadena	Geol. 116	Phi Gamma Delta
Wright, Fay Linton	Santa Ana	M. E. 60	Theta Delta Chi
Wright, Faye	Hanford	Hist. 113	83 Roble
Wright, Harold D.	Santa Barbara	M. E. 105	Encina
Wright, Natalie	Los Angeles	Ger. 75	Chi Omega
Wulff, Horace Byington	Sacramento	PreL. 35	Phi Kappa Sigma
Wyckoff, Harry Wilson	San Francisco	Econ. 12	Phi Delta Theta
Yamate, Sasato	Hiroshima-Ken, Japan	Econ. 10	733 Ramona
Yasutake, Jack K.	Takuoka, Japan	M. E. sp. 35	Japanese Club
Yates, Claude Oscar	Alameda	Econ. 102	Sigma Alpha Ep.
Yeto, Yoshio	Oakland	Econ. †14	733 Ramona-p
Yewell, Paul Ridout	Los Angeles	Geol. 96	304 Encina
Yoder, Olive Lillian	Los Angeles	Hist. gr.	Delta Delta Delta
A. B., Stanford, 1916.			
Young, Alfred Carter	Honolulu, T. H.	Law gr.	Beta Theta Pi
A. B., Yale, 1915.			
Young, Forrest Joseph	Los Angeles	M. E. 16	11 Salvatierra
Young, Isabelle Gibson	Albany, Ore.	Hist. 27	Kappa Alpha Theta
[2]Young, Julia Porter	Stockton	Econ. †	Kappa Kappa Gam.
[1]Young, Mary Frances	Hollywood	Ger. 71	675 Channing-p
Zacharias, George W.	Enid, Okla.	Geol. 73	Delta Upsilon
Zeidler, Evan Verle	Rockwell, Ia.	PreL. 47	660 Waverley-p
[2]Zeidler, Richard	Palo Alto	Educ. gr.	1630 Middlefield-p
Ph. B., Wisconsin, 1906; M. L., California, 1912.			

Zeitlin, Marion Albert	Douglas, Ariz.	Engl. 62	358 Encina
[2]Zook, Clarence V.	Sunnyside, Wash.	Econ. 12	347 Ramona-p
Zvenigrad, Abraham A. B., Stanford, 1916.	New York, N. Y.	Hist. gr.	Mayfield
Zwingman, Charles C.	New Haven, Conn.	Econ. 37	Phi Gamma Delta

SUMMER SESSION, 1916

ANATOMY

Bevier, George, Jr.
Carey, Thomas Sheridan
Cooper, Harold John
Cooper, John Alfred
Cowgill, George Raymond
Duncan, John Atkinson
Finney, Clara Eugenia
Ford, Nell Elizabeth
Ghrist, Orrie E.
Kelker, George D.
Prien, Otto Louis
Simonds, Sarah Louise
Stewart, Gwendolyn
Swett, Wilber Frank

GEOLOGY

Briggs, Otis Emmons
Crocker, Clarke Wilkins
Dubendorf, Horace Hayes
Faries, Culbert William
Fox, Byron Parlier
Green, Waldron A.
Hayes, Allan Sidney
Holloway, Godfrey Ernest
Hulsman, Ivan M.
Johnston, Duncan McArthur
King, Vernon Leslie
Mattei, Albert Chester
Melcon, Zenas K.
Rehm, Francis Edward
Ross, John Stanley
Stanley, Herbert Mark
Steiney, Homer J.
Stewart, Harold Smith
Wickersham, Newton W.
Wolf, Leslie Milton
Wright, Ernest Neall, Jr.
Yewell, Paul Ridout
Zacharias, George W.

LAW

Beal, Edgar Reed
Bleecker, Robert Boynton
Breuner, John, Jr.
Brun, Otis Gorham
Bryan, Carleton Felton
Butterfield, David Rowland
Castle, Otis Henry
Chase, Frank Forrester
Dalzell, William C.
Denhart, Harry John
Dunlap, David Porter
Dyer, Thomas Lafayette
Field, F. A.
Gangestad, Roy Sylvester
Gilroy, William
Graham, Chalmers George
Griffin, Robert Allen
Hall, Herbert Russell
Harris, Ronald Biddle
Hefflefinger, Orval Jewel

Hutchinson, Arthur Stanley
Hyatt, Victor
Kegley, Carl Smith
Kellar, Edward
Kerwin, Margaret Hope
Keyston, Gaston Donald
Kincaid, George Clark
Lyon, William Penn
McNair, Jerome Willis
Marble, Russell Price
Miller, James Andrew
Moore, Charles Dunn
O'Connell, Francis Anthony
Ordway, Frank Aaron
Paul, William Glae
Richey, Frank Herbert
Schnetzler, Stanley Stolz
Scott, Shirley Edward
Smith, Stanford Geary
Sylva, Joseph L. M.
Welch, Robert Johnson
West, Z. Bertrand, Jr.
Whittier, Winifred C.
Wolford, Catlin
Zwingman, Charles C.

MARINE BIOLOGICAL LABORATORY

Allin, Hazel
Bacon, Ruth
Bleecker, Robert Boynton
Bryan, Carleton Felton
Campbell, Leon George
Chandler, Loren Roscoe
Chase, Edith June
Clark, Helen Virginia
Cluff, Geraldine Marion
Curry, Marjorie
Curtner, William Weller
D'Ambrogio, Natalis J. V.
Darsie, Jean
Dean, Marjorie
Egbert, Dorothy
Emerson, Ethel
Galpin, Ellen Tupper
Gilliland, Otho James
Gonzales, Francisco Leopoldo
Graham, Chalmers George
Grove, Ruth Frisbie
Hatch, Chesley Warde
Hayes, Loy Bassett
Henderson, Charles Edward
Holman, Ritter
Hunt, Jessimine
Hyatt, Victor
Jackson, Charles Donald
Johnstone, Harry Cranston
Kegley, Helen Catherine
Kegley, Hugh Paul
Kirksey, Morris Marshall
Kohl, George Fred
Lakin, Ruth Caroline
Lamb, Emily Oouthout
Liversidge, Esther Serena
Lockwood, Roland Marquam
Myers, Esther
Noack, Thea
Oyster, Alfred Joseph
Phares, John French
Pilcher, Velona Bissell
Sample, Fillmore Collins
Sanborn, Maury Holland
Shapley, Harlow
Shapley, Martha B.
Smith, Gwendoline
Thomas, Stephen C.
Towne, Helen
Twohy, Philip Joseph
Wagner, Elizabeth Dorothea
Welch, Robert Johnson
Williams, Robert T
Wolford, Catlin

SUMMARIES

Officers

Trustees		15
Academic Council—rank of		
Professor	64	
Associate Professor	32	
Assistant Professor	34	
Total (less 5 absent on leave)		125
Other Teaching and Administrative Officers—rank of		
Emeritus Professor	7	
Clinical Professor	8	
Associate Clinical Professor	2	
Assistant Professor	10	
Assistant Clinical Professor	9	
Lecturer	7	
Instructor	50	
Clinical Instructor	16	
Total (less 4 absent on leave)		105
Assistants		
Instruction	36	
Administration	9	
Medical School	32	
Library	17	
Total (counting half-year assistants ½ each)		94

Students

		1st Sem.	2d Sem.	For Year
Graduates		268	282	323
Candidates for Degree of A. M.	80			
Candidates for Degree of Engineer	20			
Candidates for Degree of J. D.	57			
Candidates for Degree of M. D.	73			
Candidates for Degree of Ph. D.	19			
Other Graduate Students	74			
Undergraduates		1706	1570	1805
Special Students		55	50	58
Total		2029	1902	2186
Summer Registration			136	
Less names already counted			101	35
Total for the year (including Summer Registration)				2221

By Major Subjects

	Graduate	Under-graduate	Special	Total
Anatomy	1	—	—	1
Applied Mathematics	—	—	—	—
Bacteriology	3	8	1	12
Botany	9	13	1	23
Chemistry	10	124	1	135
Civil Engineering	9	89	8	106
Economics	18	272	12	302
Education	28	59	2	89
Electrical Engineering	5	—	—	5
English	25	149	3	177
Entomology	4	12	—	16
Germanic Languages	7	35	—	42
Geology and Mining	12	85	5	102
Greek	1	11	—	12
History	17	114	—	131
Latin	10	15	—	25
Law—Professional	57	170	7	457
—Pre-Legal	—	217	6	
Mathematics	8	27	—	35
Mechanical Engineering	5	171	7	183
Medicine	69	†29	—	†98
Pathology	1	—	—	1
Philosophy	1	10	—	11
Physics	4	7	—	11
Physiology and Histology	3	121	4	128
Psychology	1	11	1	13
Romanic Languages	10	64	—	74
Zoology	5	17	—	22

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† Also registered as Physiology majors, 23; as Chemistry majors, 2.

By Residence

California	1629
Oregon	83
Washington	56
Arizona	39
Colorado	39
Illinois	25
Idaho	22
Iowa	22
Montana	22
Utah	20
Nevada	17
New York	14
Minnesota	12
Missouri	12
Wisconsin	11
Nebraska	10
Pennsylvania	9
Hawaii	8
Indiana	8
Kansas	8
Ohio	8
Philippine Islands	8
Wyoming	8
Texas	7
Michigan	6
Massachusetts	5
Connecticut	4
Oklahoma	4
South Dakota	4
Kentucky	3
Alaska	2
Maine	2
New Mexico	2
Tennessee	2
Arkansas	1
District of Columbia	1
Maryland	1
North Dakota	1
Vermont	1
Canada	19
Japan	16
China	7
Australia	3
South America	2
Central America	1
Germany	1
Mexico	1

ALUMNI ASSOCIATION

[Organized June 15, 1892]

CONSTITUTION

(As amended, 1908-14)

IN order to promote the interests of the University, to secure unity among its graduates, and to foster an attachment to our *Alma Mater,* we do hereby constitute ourselves an association to be known as the Alumni Association of the Leland Stanford Junior University.

I. MEMBERSHIP

1. All persons who have received a degree from the Leland Stanford Junior University are members of this Association.

2. All members of the Faculty are honorary members of this Association.

II. OFFICERS

1. The officers of this Association shall be: (1) a President; (2) a Vice-President; (3) a Secretary-Treasurer; (4) an Executive Committee consisting of the Secretary-Treasurer and four other elected members, one of whom shall be designated as Chairman, but the President shall not be a member of the Committee; and (5) an Advisory Board, consisting of the President, the Secretary-Treasurer, one representative elected by the graduating class for the term of one year, and nine elected members who shall be graduates of five years' standing, and who shall be elected for three-year terms. . . . The Advisory Board shall elect its President and Secretary.

2. All other officers shall serve for one year or until their successors are elected.

III. DUTIES OF OFFICERS

1. It shall be the duty of the President to preside at all business meetings of the Association, to deliver the President's address on Alumni Day, and to perform such other duties as usually belong to his office.

2. It shall be the duty of the Vice-President to preside in the absence of the President and to perform the other duties belonging to his office.

3. It shall be the duty of the Secretary-Treasurer to keep accurate

minutes of the meetings of the Association and to act as Secretary of the Executive Committee, of which he shall be a member.

4. It shall also be the duty of the Secretary-Treasurer to have charge of the collection and disbursement of the funds of the Association.

5. The Secretary-Treasurer shall be allowed ten per cent of all dues or assessments collected, as compensation for his services.

6. It shall be the duty of the Executive Committee to arrange for the program to be presented on Alumni Day; or any programme for other public occasions; to regulate the finances of the Association; to perform such other duties as may be imposed upon it; and to attend to all business of the Association not otherwise provided for.

7. It shall be the duty of the Advisory Board, when deemed advisable, to consult alumni, undergraduates, faculty, and trustees, and to make recommendations regarding the welfare of the University and of the Alumni Association.

IV. COMMITTEES

1. The President shall be ex-officio a member of all Committees, except the Executive Committee.

2. At each annual business meeting the President shall appoint a committee of two persons to audit the Treasurer's accounts.

V. ELECTIONS

1. The February issue of the *Alumnus* shall give notice of the annual nomination and election of officers of this Association. Said notice shall contain the names of the incumbent officers and shall indicate the hold-over members of the Advisory Board, and shall contain in full the provisions of this Constitution relating to nominations and elections.

2. Nominations in writing, signed by at least twenty members, shall be required for any nomination. Nominations shall be forwarded to the Secretary-Treasurer between the first day of February and the first day of April of each year. On or before the fifteenth day of April of each year, the Secretary-Treasurer shall mail to every member of this Association, whose address he knows, an official ballot containing all the nominations, with the addresses of the nominees and the number of proposers of each, and said ballot shall be published in the May issue of the *Alumnus.*

3. Officers shall be elected at an annual election to be held at Stanford University on Alumni Day, between the hours of nine o'clock A.M., and twelve o'clock noon. The Executive Committee shall have charge of the election. The elector may cast a written ballot in person, or by mail addressed to the Secretary-Treasurer, marked "Ballot" and

disclosing the sender's name, and enclosing a ballot in a plain envelope. Ballots so received shall be opened and cast only during the hours of election. The respective candidates receiving the highest number of votes shall be declared elected. A tie vote shall be decided by lot.

4. No one whose annual dues are in arrears for the current year shall be entitled to vote or to hold office.

VI. DUES

The dues of the Association shall be $1.25 per year for each member thereof, which amount shall include a subscription to the *Alumnus*.

Provided, however, that all members who, prior to May 1908, have paid $5.00 shall be exempted from further dues.

VII. MEETINGS

Meetings of the Association may be called by the President or by petition of twenty members, said meetings to be held at Stanford University.

VIII. AMENDMENTS

Any proposition to alter or amend these Articles of Association must be proposed in writing, signed by twenty members, and submitted to the members by mail in printed form by the Secretary-Treasurer, and voted upon in the same manner as are nominations for officers, and adopted by a majority vote.

Officers of the Association, 1916-17

President—Leland Whitman Cutler, '06.

Vice-President—Edward Clair Thoits, '98.

Secretary-Treasurer—John Ezra McDowell, '00.

Executive Committee—Alfred Lockwood Trowbridge, '05, Chairman; Richard Watts Barrett, '04; William Wallace Behlow, '07; *Orrin Allen Wilson, '05; John Ezra McDowell, '00.

Advisory Board—Gilbert Denison Boalt, '03, President; Alfred Baker Spalding, '96; Thomas Marion Williams, '97; John Ezra McDowell, '00; Elmer George Brua, '04; Walter Raleigh Hamilton, '04; Alice Windsor Kimball, '04; Leland Whitman Cutler, '06; William Henry Begbie Fowler, '06; Mrs. Jessie McGilvray Treat, '07; Daniel Wellman Burbank, '09; Warren Paul Staniford, '16.

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*Deceased.

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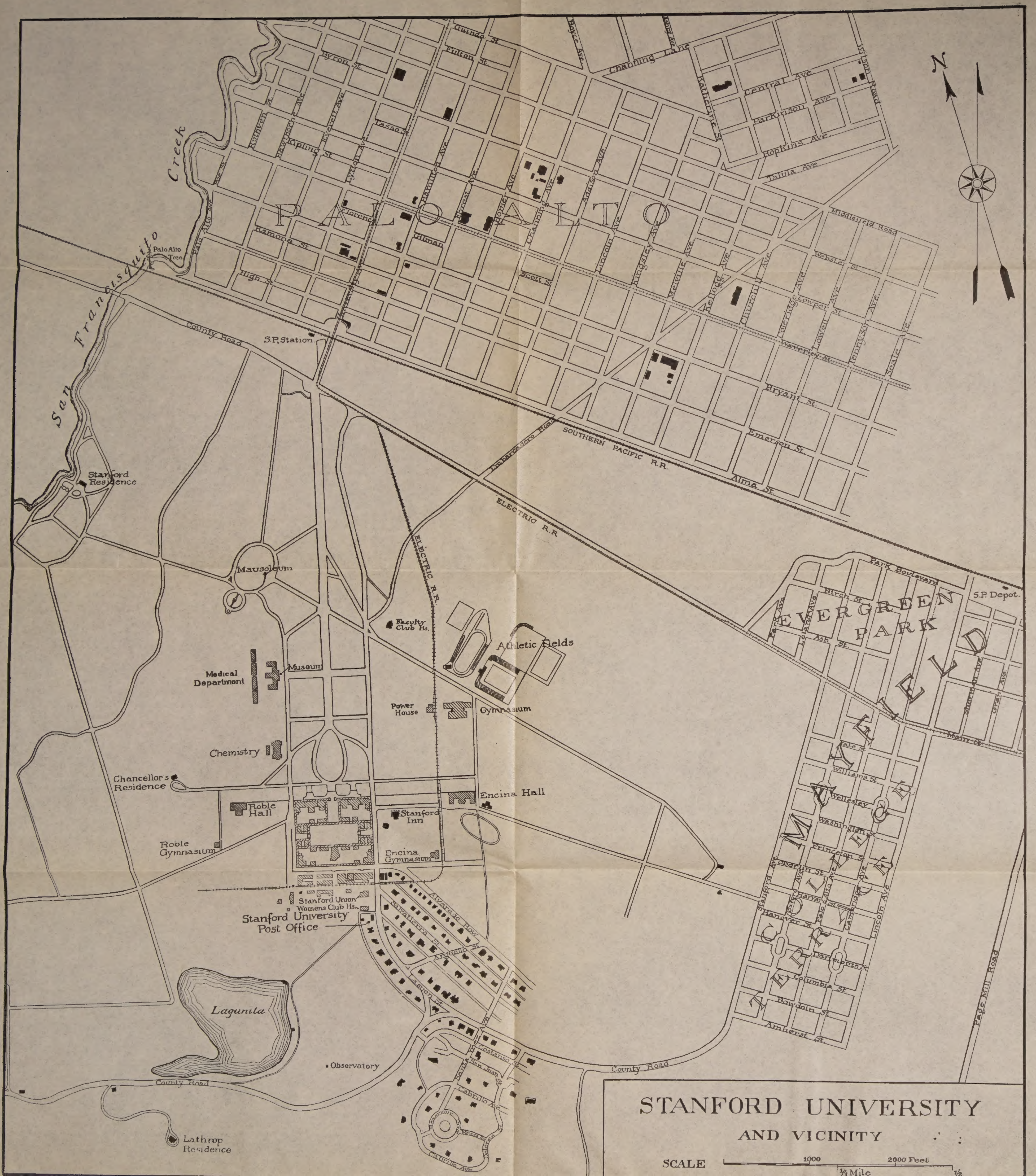
N
PALO ALTO
San Francisquito Creek
Palo Alto Tree
Stanford Residence
Mausoleum
Faculty Club Hs.
Athletic Fields
Medical Department
Museum
Power House
Gymnasium
Chemistry
Chancellor's Residence
Roble Hall
Roble Gymnasium
Encina Hall
Stanford Inn
Encina Gymnasium
Stanford Union
Womens Club Hs.
Stanford University Post Office
Lagunita
Observatory
Lathrop Residence
S.P. Station
S.P. Depot
County Road
SOUTHERN PACIFIC R.R.
ELECTRIC R.R.
Embarcadero Road
Alma St.
Emerson St.
Bryant St.
Waverley St.
Cowper St.
Webster St.
Middlefield Road
Scott St.
High St.
Ramona St.
Florence
Gilman
Palo Alto Ave.
Fife St.
Ruthven
Hawthorne Ave.
Kipling St.
Everett Ave.
Lytton Ave.
Tasso St.
Hamilton Ave.
Forest Ave.
Homer Ave.
Channing Ave.
Addison Ave.
Lincoln Ave.
Kingsley Ave.
Melville Ave.
Kellogg Ave.
Churchill Ave.
Coleridge Ave.
Lowell Ave.
Tennyson Ave.
Seale Ave.
Byron St.
Fulton St.
Guinda St.
Boyce Ave.
Channing Lane
Katherine St.
Central Ave.
Parkinson Ave.
Hopkins Ave.
Talula Ave.
Wilson Road
EVERGREEN PARK
Park Boulevard
Birch St.
Ash St.
Leland Ave.
Sherman Ave.
Grant Ave.
MAYFIELD
COLLEGE TERRACE
Yale St.
Williams St.
Wellesley St.
Washington St.
Princeton St.
Oberlin St.
Harvard St.
Hanover St.
Dartmouth St.
Columbia St.
Bowdoin St.
Amherst St.
Stanford Ave.
Palo Alto Ave.
Cambridge Ave.
Lincoln Ave.
Page Mill Road
Alvarado Row
Salvatierra St.
Arguello St.
Lasuen St.
Costanso St.
San Juan St.
Cabrillo Ave.
Dolores St.

STANFORD UNIVERSITY

AND VICINITY

SCALE 0 1000 2000 Feet ¼ Mile ½